

CONSTRUCTION CONTRACT

THIS CONSTRUCTION CONTRACT (“Contract”) is made and entered into on the date of the last signature set forth below, by and between the City of Littleton, a municipal corporation within the State of Colorado (“City”), and **SILVA CONSTRUCTION, INC.** a Colorado corporation (“Contractor”). The Contractor and the City are referred to as a “Party” or collectively the “Parties.”

RECITALS AND REPRESENTATIONS

WHEREAS the City issued a solicitation for bids no. 10-2025, and the Contractor submitted a bid to perform the work; and

WHEREAS the City has elected to accept the Contractor’s bid.

NOW, THEREFORE, in consideration of the mutual covenants herein set forth, the Parties agree as follows:

1.1 **Contract Documents and Exhibits.** The term “Contract Documents” consist of this Contract together with the following:

Exhibit A	Scope of Work
Exhibit B	Bid Schedule
Exhibit C	General Conditions
Exhibit D	Construction Contract Forms
Exhibit E	Drawings and Specifications
Exhibit F	Special Conditions

All exhibits referred to in this Contract are attached hereto and are, by reference, incorporated herein for all purposes. In the event any matter, term, provision, or condition that is the subject of this Contract requires clarification or is in dispute, or is the subject of a difference of opinion, the purpose and intent of the Contract shall be first ascertained by reference to the Contract Documents in their entirety. In the event of any dispute or differences between the respective documents that constitute the Contract Documents, then the Contractor shall secure the written instructions from the City before proceeding with the performance of the services affected by such conflicts, omissions or discrepancies.

1.2 **Project.** The Contractor shall commence and complete the Scope of Work (“Work”), **Exhibit A**, in accordance with the Contract Documents, as defined herein. The Contractor agrees to perform and complete the Work in a proper and workmanlike manner, consistent with the highest standards of professional and construction practices and in full compliance with, and as required by or pursuant to, this Contract, and with the greatest economy, efficiency, and expedition consistent therewith, with only new, undamaged and first quality equipment, materials and supplies. The Contractor shall, at its own expense, furnish all labor,

materials, tools, supplies, machinery, utilities, permits, licenses, and other equipment that may be necessary for the completion of the Work, as outlined in the Contract Documents. No work shall commence until a Notice to Proceed has been issued, and if required by the City, until after approval by the City Council in accordance with the City Charter and City Code.

- 1.3 **Commencement and Completion of the Project.** The Contractor understands and agrees that all Work required under this Contract shall be fully completed, as set forth in the Contract Documents, **within 75 calendar days of the date of the Notice to Proceed.** The Contractor acknowledges and understands that it is an essential term of this Contract that Contractor maintain a rate of progress in the Work that will result in completion of the Work in accordance with the Contract Documents, and to that end, Contractor agrees to proceed with all due diligence to complete the Work in a timely manner in accordance with the Contract Documents.
- 1.4 **Contract Price.** The City accepts the Contractor's bid for the estimated quantities and costs as set forth in the Bid Schedule, **Exhibit B**, in the total amount of **\$2,217,187.00**. The City shall make payment(s) to Contractor in the manner and at such times as set forth in the General Conditions of such amounts as are required by the Contract Documents. The City shall deduct and retain five (5) percent from the total amount of each approved invoice, including Change Orders. The City may also deduct in addition to retainage as stated above, the additional amount(s) of any and all outstanding claims pursuant to Colorado Revised Statute ("C.R.S.") §38-26-107 from each approved invoice. The City has appropriated sufficient funds for the completion of this work.
- 1.5 **Payments to Constitute Current Expenditures.**
 - 1.5.1 Notwithstanding any other term, provision, or condition herein, all financial obligations of the City are contingent on funds for that purpose being appropriated, budgeted and otherwise made available by the City Council. The City's obligations under the Contract shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of the City within the meaning of Article X, Section 20 of the Colorado Constitution.
 - 1.5.2 Further, pursuant to 103.6(2) of Article 91, Title 24, C.R.S., no Change Order, Amendment, or other form of order or directive by the City which requires additional compensable work to be performed, and which work causes the aggregate amount payable under this Contract to exceed the amount appropriated for the original Contract, shall be executed, or shall work be performed by the Contractor, unless the City provides written assurances to the Contractor that lawful appropriations to cover the costs of such additional work have been made or unless such work is covered under a remedy-granting provision of this Contract. For purposes of this paragraph, "remedy-granting provision" shall be defined as set forth in C.R.S. §24-91-103.6(4).

1.6 **Confidentiality.** Notwithstanding any provision in the Contract Documents to the contrary, the City is obligated to comply with the Colorado Open Records Act (C.R.S. §§24-72-101 *et seq.*), which may require the City to disclose all or a portion of communications relating to the Contract, or terms of same, or of any transaction under the Contract, and other related matters. The Contractor shall familiarize itself with the Colorado Open Records Act. In no event shall the City be liable to the Contractor for the disclosure of all or a portion of communications, or relating documents, or electronic imaging, including all documents and exhibits that may be included as part of this Contract.

1.7 **Insurance.**

1.7.1 The Contractor shall not commence work, and shall not allow any subcontractor to commence work, until it has obtained all insurance required herein and such insurance has been approved by City. For the duration of the Contract, the Contractor must maintain the insurance coverage required in this section. The City's acceptance of a certificate of insurance or other proof of insurance that does not comply with all insurance requirements set forth in this Contract shall not act as a waiver of the Contractor's breach of Contract or of any of the City's rights or remedies under this Contract.

1.7.2 The Contractor shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to the Contract Documents by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

1.7.3 The Contractor shall procure and maintain at its own cost and shall cause each subcontractor of the Contractor to procure and maintain at its own cost (or shall insure the activity of Contractor's subcontractors in Contractor's own policy with respect to), the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained from the date of commencement of the Work. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workers' Compensation and Employers' Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease - policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease - each employee. The policy shall cover obligations imposed by the Workers' Compensation Act of Colorado and any other

applicable laws for any employee engaged in the performance of Work.

2. Commercial General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and TWO MILLION DOLLARS (\$2,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, and both ongoing and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards (XCU). The policy shall contain a severability of interests provision.
3. Comprehensive Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of ONE MILLION DOLLARS (\$1,000,000) with respect to each of Contractor's owned, hired and/or non-owned vehicles assigned to or used in performance of the Work. The policy shall contain a severability of interests provision.
4. Installation Floater/Inland Marine insurance with minimum limits of not less than the insurable value of the work to be performed at completion. The value shall include the aggregate value of any City-furnished equipment and materials to be erected or installed by the Contractor not otherwise insured. The policy shall protect the Contractor and the City from all insurable risks of physical loss or damage to materials and equipment not otherwise covered, while in warehouses or storage areas, during installation, during testing, and after the Work under this Contract is completed. The policy shall be of the "all risks" type, with coverages designed for the circumstances which may occur in the particular Work to be performed under this Contract. The policy shall provide for losses to be payable to the Contractor and the City as their interests may appear. The policy shall contain a provision that in the event of payment for any loss under the coverage provided, the insurance company shall have no rights of recovery against the Contractor or the City.

1.7.4 The City of Littleton shall be included as additional insured for Commercial General Liability and Comprehensive Automobile Liability insurance. The City of Littleton shall be included as additional insured or loss payee for

Installation Floater/Inland Marine insurance. All policies of insurance providing additional insured status shall be primary insurance, and any insurance carried by the City, its officers, or its employees, shall be excess and not contributory insurance to that provided by Contractor. The additional insured endorsement for the Commercial General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Contractor shall be solely responsible for any deductible losses under each of the policies required above.

- 1.7.5 Certificates of insurance shall be completed by the Contractor's insurance company as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be subject to review and approval by the City. The certificate cannot contain "endeavor to" language in the portion of the certificate addressing cancellation. The City of Littleton shall be included as Certificate Holder. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.
- 1.7.6 The coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least thirty (30) days' prior written notice has been given to the City. Failure on the part of the Contractor to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of Contract upon which the City may immediately terminate the Contract, or at its discretion may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Contractor to the City upon demand, or the City may offset the cost of the premiums against any monies due to Contractor from the City.
- 1.7.7 The Parties hereto understand and agree that the City is relying on, and does not waive or intend to waive by any provision of this Contract, the monetary limitations (presently \$387,000 per person and \$1,093,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, C.R.S. § 24-10-101 et seq., as from time to time amended, or otherwise available to the City, its officers, or its employees.
- 1.8 **Taxes.** The City of Littleton is not subject to taxation. The Contractor shall not invoice the City for any state, federal or local taxes whatsoever. Upon written notification by the City, the Contractor shall reimburse the City in a timely manner for any taxes erroneously paid by the City.

- 1.9 **Waiver of Breach.** A waiver by any Party to the Contract or the breach of any term or provision of the Contract shall not operate or be construed as a waiver of any subsequent breach by either Party.
- 1.10 **No Third-Party Beneficiaries.** It is expressly understood and agreed that enforcement of the terms and conditions of this Contract, and all rights of action relating to such enforcement, shall be strictly reserved to the City and the Contractor and nothing contained in this Contract shall give or allow any such claim or right of action to any other third-party on this Contract. It is the express intention of the City and the Contractor that any person other than the City or the Contractor receiving services or benefits under this Contract shall be deemed to be an incidental beneficiary only.
- 1.11 **Independent Contractor.** The Contractor shall perform the Work as an independent contractor and shall not be deemed by virtue of this Contract to have entered into any partnership, joint venture, employer/employee or other relationship with the City other than as a contracting party and independent contractor.
- 1.12 **Non-Discrimination.** In connection with the performance of the Work, the Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ethnicity, citizenship, immigration status, sex, gender, age, sexual orientation, gender identity or gender expression, marital status, source of income, military status, protective hairstyle, genetic information, pregnancy, or disability, or any other status protected by applicable law. The Contractor will take affirmative action to ensure applicants are employed, and employees are treated during employment, without regard to their race, color, religion, national origin, ethnicity, citizenship, immigration status, sex, gender, age, sexual orientation, gender identity or gender expression, marital status, source of income, military status, protective hairstyle, genetic information, pregnancy, disability, or any other status protected by applicable law. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 1.13 **Indemnification.** The Contractor agrees to investigate, defend, indemnify and hold harmless the City, its officers, employees, insurers, and self-insurance pool, from and against all liability, claims and demands on account of any losses, injuries, and damages, including but not limited to, alleged personal injury claims, and/or death claims, or property damage claims, or errors and omissions, which arise solely out of the Contractor's and/or any of its agents' officers or employees performance of the Contractor's obligations under this Contract. The City is prohibited by Article XI, Section 1, Colorado Constitution, from indemnifying any individual or entity. Therefore, the City does not indemnify the Contractor, successors, or assigns under this Contract. Notwithstanding the foregoing, nothing

herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless the City from any liability or damages directly caused by or attributable to the City's own negligence, nor is anything herein intended to be nor may be construed as a waiver of the immunities, protections, or limitations on damages provided to the City by the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 et seq., as it may from time to time be amended.

- 1.14 **Governing Law and Venue.** The Contract shall be governed by the laws of the State of Colorado. Venue for any action arising under the Contract or for the enforcement of the Contract shall be in the appropriate court for Arapahoe County, Colorado.
- 1.15 **Additional Documents or Action.** The Parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Contract.
- 1.16 **Binding Effect.** This Contract shall inure to the benefit of, and be binding upon, the Parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Contract except as otherwise expressly authorized herein.
- 1.17 **Integration, Amendment, and Severability.** This Contract represents the entire agreement between the Parties and there are no oral or collateral agreements or understandings. This Contract may be amended only by an instrument in writing signed by the Parties or as otherwise provided herein. If any other provision of this Contract is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Contract shall continue in full force and effect.
- 1.18 **Binding Authority.** The Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Contract may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.
- 1.19 **Subject to Legislative Approval and Compliance with Law.** The Contractor acknowledges and agrees that if a Change Order is required under the terms of the Contract, the City shall not incur any liability whatsoever for claims of payment, compensation, damages, or adjustment of any kind by the Contractor due to any delays for the required approvals and execution under Section 1.3 of the General Conditions, **Exhibit C**. The Contractor further acknowledges and agrees that this

Contract's execution may be contingent upon approval by the City Council, in compliance with all applicable provisions of the City Charter and City Code. The City shall not incur any liability whatsoever if this Contract is not approved by City Council.

- 1.20 **Notices.** All notices required under this Contract shall be in writing and shall be sent by registered or certified mail, return receipt requested, to the addresses of the Parties herein set forth. A Party may change its mailing address by giving written notice of such change of address to other Party.

Notice to City:	City of Littleton City Manager 2255 West Berry Avenue Littleton, CO 80120
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Notice to Contractor:	Silva Construction, Inc. 421 W 70th Pl Denver, Colorado 80221
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- 1.21 **Force Majeure.** Neither Party shall be responsible for a delay in its respective performance under this Contract, other than a delay in payment for Work already performed, if such delay is caused by extraordinary weather conditions or other natural catastrophes, war, terrorist attacks, sabotage, computer viruses, riots, strikes, lockouts or other industrial disturbances, epidemics, pandemics, acts of governmental agencies or authorities, discovery of hazardous materials or differing and unforeseeable site conditions, or other events beyond the reasonable control of the claiming Party. Contractor shall be entitled to an equitable adjustment to the project schedule and compensation in the foregoing circumstances.
- 1.22 **Electronic Signatures and Electronic Records.** The Contractor consents to the use of electronic signatures by the City. The Contract, and any other documents requiring a signature hereunder, may be signed electronically by the City in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Contract solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Contract in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

DATED this ____ day of _____, 2025.

CITY OF LITTLETON, COLORADO

ATTEST

Kyle Schlachter
MAYOR

Colleen Norton
CITY CLERK

APPROVED AS TO FORM:

Reid Betzing
CITY ATTORNEY



CONTRACTOR

Jose Silva
PRESIDENT

Date

Exhibit A

Contractor shall perform grading, asphalt pavement, concrete sidewalk, concrete curb ramps, curb & gutter, storm sewer, construction traffic control, erosion control, signing, and striping from Elati Street to Broadway in Littleton.

Exhibit B

Item No.	Quantity Items	Units	Quantity	Unit Cost	Cost
202-00018	Removal of Catch Drain	EACH	2	\$ 3,500.00	\$7,000.00
202-00019	Removal of Inlet	EACH	1	\$ 2,700.00	\$2,700.00
202-00021	Removal of Manhole	EACH	1	\$ 2,700.00	\$2,700.00
202-00035	Removal of Pipe	LF	175	\$ 50.00	\$8,750.00
202-00200	Removal of Sidewalk	SY	403	\$ 18.00	\$7,254.00
202-00203	Removal of Curb and Gutter	LF	478	\$ 9.00	\$4,302.00
202-00204	Removal of Curb, Gutter and Sidewalk	LF	2,572	\$ 13.00	\$33,436.00
202-00206	Removal of Concrete Curb Ramp	SY	88	\$ 20.00	\$1,760.00
202-00210	Removal of Concrete Pavement	SY	200	\$ 20.00	\$4,000.00
202-00220	Removal of Asphalt Mat	SY	6,571	\$ 17.00	\$111,707.00
202-00226	Removal of Asphalt Mat (Special)	SY	128	\$ 20.00	\$2,560.00
202-00810	Removal of Ground Sign	EACH	8	\$ 100.00	\$800.00
203-00000	Unclassified Excavation	CY	3,220	\$ 60.00	\$193,200.00
208-00008	Erosion Log Type 2 (12 Inch)	LF	1,912	\$ 5.00	\$9,560.00
208-00029	Reinforced Rock Berm	LF	28	\$ 200.00	\$5,600.00
208-00035	Aggregate Bag	LF	96	\$ 30.00	\$2,880.00
208-00045	Concrete Washout Structure	EACH	1	\$ 1,000.00	\$1,000.00
208-00054	Storm Drain Inlet Protection (Type II)	EACH	10	\$ 60.00	\$600.00
208-00070	Vehicle Tracking Pad	EACH	2	\$ 10,000.00	\$20,000.00
208-00200	Erosion Control Management	LS	1	\$ 18,000.00	\$18,000.00
210-00065	Reset Monument (Type 3A)	EACH	1	\$ 500.00	\$500.00
210-00810	Reset Ground Sign	EACH	4	\$ 100.00	\$400.00
210-00827	Reset Pull Box	EACH	1	\$ 2,000.00	\$2,000.00
210-04010	Adjust Manhole	EACH	8	\$ 400.00	\$3,200.00
210-04050	Adjust Valve Box	EACH	9	\$ 400.00	\$3,600.00
214-00200	Landscape Restoration	LS	1	\$ 13,000.00	\$13,000.00
216-00201	Soil Retention Blanket (Straw-Coconut) (Biodegradable)	SY	73	\$ 21.00	\$1,533.00
304-06007	Aggregate Base Course (Class 6)	CY	2,033	\$ 60.00	\$121,980.00
403-00720	Hot Mix Asphalt (Patching)	TON	35	\$ 180.00	\$6,300.00
403-33741	Hot Mix Asphalt (Grading S) (75) (PG 64-22)	TON	701	\$ 146.00	\$102,346.00
403-34741	Hot Mix Asphalt (Grading SX) (75) (PG 64-22)	TON	703	\$ 146.00	\$102,638.00
412-00600	Concrete Pavement (6 Inch)	SY	488	\$ 107.00	\$52,216.00
412-01000	Concrete Pavement (10 Inch)	SY	108	\$ 170.00	\$18,360.00
412-01001	Concrete Pavement (10 Inch) (Special)	SY	54	\$ 170.00	\$9,180.00
503-00018	Drilled Shaft (18 Inch)	LF	24	\$ 400.00	\$9,600.00
603-01185	18 Inch Reinforced Concrete Pipe (CIP) or ADS HP Storm Pipe	LF	170	\$ 200.00	\$34,000.00
603-01245	24 Inch Reinforced Concrete Pipe (CIP) or ADS HP Storm Pipe	LF	1,100	\$ 189.00	\$207,900.00
604-16050	Inlet Type 16 (Single) (Special)	EACH	5	\$ 11,000.00	\$55,000.00
604-16550	Inlet Type 16 (Double) (Special)	EACH	2	\$ 13,500.00	\$27,000.00
604-19205	Inlet Type R L10 (5 Foot)	EACH	1	\$ 13,500.00	\$13,500.00
604-19305	Inlet Type R L15 (5 Foot)	EACH	1	\$ 18,000.00	\$18,000.00
604-39010	Manhole Special (10 Foot)	EACH	7	\$ 11,000.00	\$77,000.00
608-00000	Concrete Sidewalk	SY	2,695	\$ 106.00	\$285,670.00
608-00010	Concrete Curb Ramp	SY	207	\$ 130.00	\$26,910.00

609-21020	Curb and Gutter Type 2 (Section II-B)	LF	2,976	\$ 40.00	\$119,040.00
609-22021	Curb, Gutter and Sidewalk Type 2 (Section MS)	LF	105	\$ 113.00	\$11,865.00
614-00011	Sign Panel (Class I)	SF	59	\$ 50.00	\$2,950.00
614-00012	Sign Panel (Class II)	SF	63	\$ 30.00	\$1,890.00
614-00217	Steel Sign Post (2x2 Inch Telespar Tubing)	LF	120	\$ 30.00	\$3,600.00
614-72860	Pedestrian Push Button	EACH	4	\$ 700.00	\$2,800.00
614-80003	Rectangular Rapid Flashing Beacon	EACH	4	\$ 7,500.00	\$30,000.00
614-84000	Traffic Signal Pedestal Pole Steel	EACH	4	\$ 4,500.00	\$18,000.00
626-00000	Mobilization	LS	1	\$ 64,000.00	\$64,000.00
627-00008	Modified Epoxy Pavement Marking	GAL	16	\$ 370.00	\$5,920.00
627-30210	Thermoplastic Pavement Marking (Xwalk-Stopline)	SF	506	\$ 20.00	\$10,120.00
627-30405	Preformed Thermoplastic Pavement Marking) (Word-Symbol)	SF	112	\$ 30.00	\$3,360.00
630-00000	Traffic Control	LS	1	\$ 64,000.00	\$64,000.00
700-70010	Force Account				\$250,000.00

TOTAL BID

\$2,217,187.00



Exhibit C General Conditions

SECTION 1 SCOPE OF WORK

1.1. PLANS AND SPECIFICATIONS:

1.1.1. The Contractor shall perform all items of Work covered and stipulated in the Specifications, Bid Schedule, Contract, General Conditions and Special Provisions, together with any authorized alterations, Extra Work and Change Orders, all in accordance with the Plans. The Contractor shall furnish, unless otherwise provided in the Specifications and/or Special Provisions, all materials, implements, machinery, equipment, tools, supplies, transportation and labor necessary to perform and complete the Work.

1.1.2. The Contractor shall be responsible for taking all steps reasonably necessary to ascertain the nature and location of the Work, and the general and local conditions which can affect the Work or the cost of the Work. Failure by the Contractor to do so will not relieve it from responsibility for successfully performing Work without additional expense to the City. The City will not be responsible for any understanding or representations concerning conditions unless such understanding or representations are expressly stated in the Contract.

1.2. **SPECIAL WORK:** Should any construction or conditions which are not thoroughly stipulated or set forth by the Specifications be anticipated on any proposed Project, Special Conditions for such Work may be prepared and attached hereto as **Exhibit F**, and shall be considered as part of the Specifications, the same as though contained fully therein. Should any Special Conditions conflict with the Specifications, the Special Conditions will govern.

1.3. CHANGES AND INCREASED OR DECREASED QUANTITIES OF WORK:

1.3.1. Without invalidating the Contract, the Project Manager and/or City reserves and shall have the right, without notice to any Sureties, by written Change Order, to make any changes, from time to time, to the character and quantity of the Work, including but not limited to, the Drawings, Specifications, Plans or Addenda, as

may be considered necessary or desirable to complete fully and acceptably the Work in a satisfactory manner. Such Change Order shall set forth with specificity the changed Work to be done and shall set forth any changes or extensions to the time of completion.

1.3.2. Increase in Cost and Required Approvals.

- i. Such Change Orders shall not increase the total cost of the Work, based on the original estimate of quantities and unit prices contained in the Bid Schedule, by more than 10% (ten percent) without the approval of the City of Littleton City Manager or authorized designee. Contractor shall be entitled to the cost of said increased units at the original price within the original bid, but not to an adjustment of unit price.
- ii. In the event said Change Order increases the total cost of the Contract based upon the unit price bid by more than 10% (ten percent), an equitable adjustment will be made and the Contract modified accordingly by a written Change Order, to be approved by the City of Littleton City Manager or authorized designee, and subject to City Council approval; provided, however, that except for claims based on errors in the Contract, no claim for change hereunder will be allowed for cost incurred more than twenty (20) days before the Contractor gives written notice as herein required; and in the case of errors in the Contract for which the City is responsible, the adjustment will be increased costs, reasonably incurred by the Contractor in attempting to comply with such errors in the Contract.
- iii. Any Change Order or other amendment that increases the total cost of the Contract to be equal to or greater than five hundred thousand and 00/100 dollars (\$500,000.00) shall require the approval of City Council.
- iv. In case a satisfactory adjustment in price cannot be reached for any item requiring a written Change Order, the City reserves the right to terminate the Contract as to said item as it applies to the terms in question and make such arrangements as may be deemed necessary to complete the Work.
- v. The Contractor shall require subcontractors to certify to the best of their knowledge and belief that the cost and pricing data submitted are accurate, complete, and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the Change Order.
- vi. The Contractor shall not start Work on any alteration until the agreement, whether by Change Order or more formal amendment, setting forth the adjusted prices has been executed by the City and the Contractor, subject to all requirements of Title 1, Chapter 15 of the City of Littleton Code and the City's procurement policy. All changes or approvals for increasing the

Work as required and authorized herein, shall be in written form and approved and signed by the City prior to the Work being done. All such writings and approvals shall be specific as to the nature of the Work and the quantities involved. Any Work performed without prior written approval of the City shall not be binding on the City.

1.3.3. *Field Order for Minor Changes.* The Project Manager ("Project Manager") may at any time, by issuing a Field Order, order minor changes in the Work not involving an increase or decrease in the Contract amount and not involving a change in the time for completion. If the Contractor believes that any order for minor changes in the Work involves changes in the Contract amount or time for completion, the Contractor shall not proceed with the minor changes so ordered and shall within seven (7) days of the receipt of such order notify the Project Manager in writing of the estimate of the changes in the amount and time for completion. Such estimate shall thereafter be treated as a Change Order Request.

1.3.4. *Equitable Adjustment.*

- i. If the Contractor intends to assert a claim for an equitable adjustment under this Section, the Contractor shall, within 30 (thirty) days after receipt of a written Change Order or the furnishing of a written notice of requested changes by the Project Manager, submit to the Project Manager a written statement setting forth the general nature and monetary extent of such claim. No claim by the Contractor for an equitable adjustment hereunder will be allowed unless asserted as described above.
- ii. In the event the Contractor and the City are unable to agree upon the Contractor's entitlement to an equitable adjustment or upon the amount thereof, or in the event that it is in the best interest of the City to have the Work proceed pending negotiation of amount of an equitable adjustment, the City may direct the Contractor to perform the Work in accordance with the Change Order, direction, instruction, interpretation, or determination, with any Work price adjustments and progress payments for the Work to be determined on a Force Account basis in accordance with Section 7.6 of the General Conditions. The Contractor shall continue diligently to perform the Work in accordance with the City's order, direction, instruction, interpretation, or determination during negotiations with respect to the Contractor's entitlement to an equitable adjustment hereunder or to the amount of any Work price adjustment hereunder or to the amount or any Work price adjustment or time extension. The Contractor and the City may agree on certain aspects of an equitable adjustment and take those aspects out of operation of Force Account provisions.

1.3.5. *Payments for Change Orders.*

- i. Payment will not be made for Work or materials which are required under the Contract Documents and which are not specifically mentioned, indicated

or otherwise provided for in the Bid Schedule, if, in the opinion of the Project Manager, the Work or materials are susceptible of classification under or reasonably inferred to be included. in the Bid Schedule.

- ii. In the event the Contractor is ordered to perform Work under this Section for which payments are not determined hereunder, which in the opinion of the City it is impracticable to have performed by the Contractor's own employees, the Contractor will, subject to the written approval of the Project Manager, be paid the actual cost of such Work and, in addition thereto, an amount of 10% (ten percent) of the actual costs to cover the Contractor's superintendence, administration and other overhead expenses. The terms and conditions of any subcontract which the Contractor may propose to enter into in connection with Work under the provisions of this Section, shall be subject to the written approval of the City before such subcontract is executed.
- iii. In cases other than those described above, the City and the Contractor (on its own behalf and on behalf of its subcontractors) shall endeavor to negotiate a reasonable price and line adjustment in a Change Order on terms appropriate to the changed Work. The Contractor will be required to submit a sufficiently detailed price bid supported with sufficient documentation so that the City can determine that (1) the bid reflects all impacts on the Work from Work additions, deletions and modifications shown in the Change Order; (2) the proposed prices are set out in such a way that their reasonableness can be evaluated against prices based on adequate price competition, unit prices, established catalog or market prices of commercial items sold in substantial quantities to the general public, prices set by law or regulation, recognized published price lists and indices, independently developed cost estimate and other appropriate price comparisons; and (3) cost-increase provisions relating to Work changes are complied with, including but not limited to City of Littleton City Manager or City Council approvals. If any prices or other aspects are conditional, such as on firm orders being made by a certain date or the occurrence or non-occurrence of an event, the Contractor shall identify these aspects in the Change Order Request. A negotiated Change Order shall set forth prices, scheduling requirements, time extensions and all costs of any nature arising out of the issuance of a Change Order except for those cost and time aspects explicitly reserved on the face of the Change Order.

1.3.6. *Claims for Concealed or Unknown Conditions.* If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents; or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing Party shall be given to the other Party promptly before conditions

are disturbed and in no event later than seven (7) days after first observance of the conditions. Site conditions which an experienced and prudent contractor could have anticipated by visiting the site, familiarizing themselves with the local conditions under which the work is to be performed and correlating observations with the requirements of the Contract Documents, shall not be considered as claims for concealed or unknown conditions, nor shall the locations of utilities which differ from locations provided by the utility companies. The Project Manager will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or the required time for, performance of any part of the Work, will recommend an equitable adjustment in the cost and/or time. If the Project Manager determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Project Manager shall so notify the Contractor in writing, stating the reasons. Claims by either Party in opposition to such determination must be made within twenty-one (21) days after the Project Manager has given notice of the decision. If the City and Contractor cannot agree on an adjustment in the cost and/or time, the adjustment shall be subject to further proceedings pursuant to Section 1.3.4 and Section 1.3.9 of the General Conditions, which shall apply to claims by either Party, notwithstanding language in said Sections that they apply only to claims brought by the Contractor.

- 1.3.7. *Inspection, Recordkeeping.* For any Change Orders, the Contractor shall maintain, and the City or the City's representatives shall have the right to examine books, records, documents and other evidence and accounting principles and practices sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of the Contract changes. At the request of the City, the Contractor shall submit any documents reasonably necessary to permit adequate evaluation of the cost or pricing data submitted including, but not limited to, computations, projections, price competition, catalog and market prices, etc. If inadequate or incomplete documentation is submitted, the City may refuse to complete negotiation until such a time that satisfactory documentation is submitted. The requirements of Section are in addition to other audit, inspection and record keeping provisions elsewhere in the Contract Documents.
- 1.3.8. Changes involving aggregate increases and decreases in excess of one hundred thousand dollars and 00/100 (\$100,000.00) shall be subject to the following:
 - a. A change, defined for the purposes of this Section, involves aggregate increases and decreases in excess of one hundred thousand dollars and 00/100 (\$100,000.00) if the total value of Work affected, without regard to any increases or decreases, exceeds this amount. For example, a Change Order adding Work in the amount of seventy-five thousand dollars and 00/100 (\$75,000.00) and reducing Work in the amount of fifty-thousand dollars and 00/100 (\$50,000.00) will be considered to involve aggregate increases and decreases of \$125,000.00.

- b. The Contractor shall submit, in support of all items not based upon unit prices or lump sum prices contained in the Contract or upon the established prices at which commercial items are sold in substantial quantities to the public, statements by vendors that the prices charged the Contractor are not greater than the prices charged by the respective vendors to their most favored customers for the same items in similar quantities.
- c. Pricing shall be reduced accordingly, and the Contract shall be modified in writing accordingly to reflect such reduction, if any price (including profit and fee) negotiated in connection with any price adjustment was increased by any significant sums because:
 - (1) The Contractor furnished cost or pricing data which were not complete, accurate, or current as certified in the Contractor's pricing data; or
 - (2) Adjustments or any subcontract provisions therein required, furnished costs or pricing data which were not complete, accurate, and current as certified in the subcontractor's pricing data.

Any reduction in the Contract price due to defective subcontractor data of a prospective subcontractor, when the subcontract was not subsequently awarded to such subcontractor, will be limited to the amount (plus applicable overhead and profit markup) by which the actual subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor, provided the actual subcontract price was not affected by defective cost or pricing data; or the Contractor shall require subcontractors to certify to the best of their knowledge and belief that the cost and pricing data submitted are accurate, complete, and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the Change Order.

- 1.3.9. In case a satisfactory adjustment in price cannot be reached for any item requiring a Change Order, the City reserves the right to terminate the Contract as to said item as it applies to the terms in question and make such arrangements as may be deemed necessary to complete the Work.

1.4. **OMITTED ITEMS:** The Project Manager may, in writing, order omitted from the Work any item other than Major Items, which are found by the Project Manager or City to be unnecessary to the Project and such omission shall not be a waiver of any condition of the Contract nor invalidate any of the provisions thereof. Major Items may be omitted by amendments to the Contract. The Contractor will be paid for all Work performed toward the completion of the item prior to such omission as provided in Section 7.5 of the General Conditions.

1.5. EXTRA WORK:

- 1.5.1. When additional Work is necessary for the proper completion of the Project for which no quantities or prices were given in the Contract, the same shall be called "Extra Work" and shall be performed by the Contractor when so directed in writing by the Project Manager. Extra Work shall be performed by the Contractor in accordance with these Specifications in a skillful and workmanlike manner and as may be directed by the Project Manager.
- 1.5.2. Prices for Extra Work shall be itemized and covered by a Change Order. Pricing shall be submitted by the Contractor and approved by the City prior to the actual starting of such Work, in accordance with Section 1.3 of the General Conditions. Should the Parties be unable to agree on unit prices for the Extra Work or if this method of pricing is impractical, the Project Manager may instruct the Contractor to proceed with the Work by day labor or Force Account as hereinafter provided in Section 7.6. of the General Conditions. Claims for Extra Work not authorized in writing by the Project Manager prior to the Work being performed will be rejected and the Contractor shall not be compensated for.
- 1.5.3. Extra Work shall not include materials, labor or equipment which is incidental or appurtenant to the Work indicated on the drawings and in the Specifications. Such Work shall be completed and paid for as part of the Work to which it is appurtenant.

1.6. **UNAUTHORIZED WORK:** Work performed beyond the lines and grades shown on the Contract drawings, approved Work and Shop Drawings and Extra Work done without written authorization will be considered unauthorized work and the Contractor will receive no compensation therefore. If required by the City, unauthorized work shall be remedied, removed or replaced by the Contractor at the Contractor's expense. Upon failure of the Contractor to remedy, remove or replace unauthorized Work, the City may take action as provided in Section 2.11 of the General Conditions.

1.7. MAINTENANCE AND CONTROL OF TRAFFIC:

- 1.7.1. Unless the Contract specifically provides for the closing to traffic of any local road or highway while construction is in progress, such road or highway shall be kept open to all traffic by the Contractor. The Contractor shall also provide and maintain in a safe condition temporary approaches, crossings or intersections with roads and highways.
- 1.7.2. The Contractor will provide their own traffic control, including flagging, traffic control supervisor, and traffic control devices for the duration of the Project per the most current edition of the Manual on Uniform Traffic Control Devices ("MUTCD"). Traffic control plans will be required for City review and approval prior to commencement on Work.
- 1.7.3. The Contractor shall bear all expense of maintaining traffic over the section of road

affected by the Work to be done under this Contract, and of constructing and maintaining such approaches, crossings, intersections and any accessory features without direct compensation, except as otherwise provided.

1.8. REMOVAL AND DISPOSAL OF STRUCTURES AND OBSTRUCTIONS: All structures or obstructions found on the site and shown on the Plans which are not to remain in place or which are not to be used in the new construction shall be removed as directed by the Project Manager. Unless specified in the Contract, this Work will not be paid for separately but will be included in the price bid for that portion of the Work requiring the removal of the obstruction. All material found on the site or removed therefrom shall become the property of the Contractor unless otherwise indicated. Materials determined by the Project Manager to be unsuitable for backfill shall be disposed of off the site at the Contractor's expense.

1.9. USE OF MATERIALS FOUND ON THE WORK:

1.9.1. The Contractor, with the approval of the Project Manager, may use in the proposed construction, any stone, sand, or gravel found on the site. The Contractor will not be paid for such excavation unless specifically stated in the Contract, and the Contractor shall replace with other suitable material, without compensation, all of that portion of the material so removed and used as was contemplated for use in the embankments or otherwise. If it was intended that any or all of the material so excavated and used was to have been wasted, then the Contractor will not be required to replace it. The Contractor shall not excavate any material from the site which is not within the excavation as indicated by the slope and grade lines, without being authorized in writing by the Project Manager.

1.9.2. Specific job mix designs conforming to specifications for any Work shall be submitted for Project Manager approval within 10 (ten) days of the Notice to Proceed, or a minimum of seven (7) days prior to use of the material. This material approval applies to asphaltic concrete paving materials, concrete, aggregate base course, and fine grading material.

1.10. FINAL CLEAN UP:

1.10.1. During the Project's final cleanup, the Contractor shall remove from the site(s) all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The streets and adjacent properties in the Project shall be repaired to as good or better condition than existed prior to construction. This shall include removal of all dirt or mud from streets and lawns. No extra payment shall be made for these items. The Contractor shall leave the site(s) in a neat and presentable condition.

1.10.2. The Contractor shall provide written notification to the Project Manager that the Work is complete and the site is ready for final inspection. If the Project Manager determines that the Work is not complete, they will immediately notify the

Contractor in writing stating the reasons. If the Project Manager determines the Work is complete, the City will inspect the Work within seven (7) r days and prepare a final cleanup list. When the final cleanup list is completed by the Contractor and inspected by the Project Manager, the Project Manager will initiate the acceptance and final payment procedures as set forth in Section 7.9 of the General Conditions. The final cleanup shall be completed before the expiration of the Contract's term as set forth in the Contract Documents.

1.11. **DELAYS:** No payment, compensation, damages, or adjustment of any kind, other than extension of time if received in writing from the City shall be made to, or claimed by, the Contractor because of hindrances or delays from any cause in the commencement, prosecution, or completion of the Work, whether caused by the City or any other party and whether avoidable or unavoidable other than as set forth in a Change Order described fully above.

SECTION 2 CONTROL OF THE WORK

2.1. **AUTHORITY OF PROJECT MANAGER:** The Project Manager shall decide any and all questions which may arise as to the quality and acceptability of the materials furnished, the Work performed, the manner of performance and the rate of progress of the Work. The Project Manager shall decide all questions which may arise as to the interpretation of the Plans and Specifications, all questions as to acceptable fulfillment of the Contract, all disputes and mutual rights by the contractors if there be more than one contractor on the Work, and all questions as to compensation. The decision of the Project Manager shall be final and shall have executive authority to make effective such decisions and to enforce the Contractor to carry out all orders promptly.

2.2. **PLANS AND SHOP DRAWINGS:**
This Section 2.2 shall be included in all subcontracts hereunder at all times.

2.2.1. The Contractor shall bring discrepancies between different Plans, or between Plans and Specifications, or regulations and codes covering the Work to the attention of the Project Manager in writing. In the event such discrepancies exist and the Project Manager is not so notified, the Project Manager shall reserve the right to exercise sole arbitration authority. It is mutually agreed that all authorized alterations affecting the requirements and information given on the approved Plans shall be in writing and approved by the Project Manager.

2.2.2. The Plans will be supplemented by Shop Drawings as necessary to adequately control the Work or as specified. Shop Drawings are not part of the Contract Documents. Shop Drawings may consist of drawings, diagrams, illustrations, schedules, calculations, and other data prepared by the Contractor, subcontractor, manufacturer, supplier, or distributor, which illustrate how specific portions of the Work shall be fabricated and/or installed in accordance with the Plans and

Specifications. Any Work performed prior to the City's approval of Shop Drawings will be at the Contractor's risk and expense.

- 2.2.3. The Project Manager may request additional details and require the Contractor to make changes in the design which are necessary to conform to the provisions and intent of these Specifications without additional cost to the City.
- 2.2.4. Approval of the Shop Drawings by the Project Manager shall not be construed as a complete check and verification but will indicate that general conformance with the design concept and general compliance with the information given in the Contract has been achieved. Any information or action to be taken as set forth in the Shop Drawings is subject to the requirements of the Plans and Specifications. The Contractor shall be responsible for all dimensions and quantities shown on the Shop Drawings. The Project Manager shall be notified in writing and shall take appropriate action for any information in the Shop Drawings that deviates from the requirements of the Contract Documents.
- 2.2.5. Approval by the Project Manager of the Contractor's Shop Drawings shall not relieve the Contractor of its obligation to meet all requirements of the Plans and Specifications and shall not relieve the Contractor of its responsibility for the correctness of the Shop Drawings.
- 2.2.6. Five (5) sets of Shop Drawings shall be submitted to the Project Manager either in hard copy format or electronic format. No faxed copies will be accepted. After inspection, two sets will be returned to the Contractor; one for the Contractor's use and the other for the fabricator or supplier's use. Shop Drawings being returned will be stamped to indicate the following:
 - i) Shop Drawings approved for use in construction will have one of the following statements checked: Approved; No Exception Taken; or Approved as Noted; or
 - ii) Shop Drawings to be corrected or redrawn and resubmitted for approval will have one of the following statements checked: Revise as Noted; Resubmit; or Rejected.

If Shop Drawings are returned for correction, corrections shall be made and the corrected drawings shall be resubmitted by the Contractor in the same manner as the first submittal. The time required for approval of each submittal will not exceed four (4) weeks after Shop Drawings are received by the Project Manager.

It is the intent that no more than two submittals will be required. If, however, additional submittals are required by actions of the Contractor, the additional time for Shop Drawing approval will be borne by the Contractor. If additional submittals are required, or if Shop Drawing approval is delayed by actions of the Project Manager, and if the Contractor's controlling operations are delayed or interfered with by reason of the delay in Shop Drawing reviews, an extension of time

commensurate with the delay in completion of the Work thus caused will be granted as provided herein.

Specifications for the Shop Drawings:

- i) Electronic Shop Drawings and work drawings are preferred.
- ii) All manually-drafted Shop Drawings shall be 34 inches long and 22 inches wide overall. There shall be a two-inch margin on the left side of the sheet and one-half inch margin on the other three sides. A blank space, six inches by three inches, shall be left near the lower right-hand corner for an approval stamp. Computer drafted 11-inch by 17-inch drawings may be submitted.
 - a. Where design notes or catalogue cuts are required, they may be submitted on 8 1/2 inch by 11-inch sheets in lieu of the size mentioned above.
- ii) There shall be a title block in the lower right-hand corner of each sheet. The title block shall show the City's name, structure number, the location of the structure, and the contents of the sheet.
- iii) The Contract price will include the cost of furnishing all Shop Drawings. Shop Drawings and working drawings submitted to the Project Manager by the Contractor, subcontractor or any lower tier subcontractor pursuant to the Work, may be duplicated by the City and the City may use and disclose in any manner and for any purpose such Shop Drawings and working drawings delivered under this Contract.

2.3. OPERATING MANUALS AND PARTS LISTS: The Contractor shall submit four (4) complete operating manuals and parts lists to the Project Manager for all items of mechanical and electrical equipment incorporated into the Work.

2.4. AS-BUILT DRAWINGS: The Contractor shall maintain a set of drawings at the site, with all changes or deviations from the original drawings neatly marked thereon in brightly contrasting color. This shall be a separate set of drawings, not used for construction purposes, which shall be kept up-to-date as the job progresses and shall be made available for inspection by the Project Manager at all times. Upon completion of the Contract, this set of drawings shall be delivered to the Project Manager.

2.5. CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS: Finished surfaces shall conform with lines, grades, cross sections and dimensions shown on the approved Plans. Any deviation from the approved Plans and working drawings, as may be required by the demands of construction, will in all cases be determined by the Project Manager and authorized in writing.

2.6. COORDINATION OF SPECIFICATIONS, PLANS AND SPECIAL PROVISIONS: The Specifications, Plans, Special Provisions, and all supplementary Plans and documents are essential parts of the Contract, and a requirement occurring in one is as

binding as though occurring in all. They are intended to be cooperative to describe and provide for a complete Work. In case of discrepancy, figured dimensions, unless obviously incorrect, shall govern over scaled dimensions. Plans shall govern over Specifications and Special Provisions shall govern over both Plans and Specifications. The Contractor shall not use to its advantage any apparent error or omission in the Plans or Specifications. In the event the Contractor discovers any apparent error or discrepancy, the Contractor shall immediately request the Project Manager's interpretation and decision, and such decision shall be final. In the event contradiction and/or conflicts occur in the Specifications not otherwise covered by Special Provisions, the Specifications deemed by the Project Manager to be most restrictive shall govern.

2.7. CONSTRUCTION SURVEYING: The Contractor will furnish and set all construction stakes. The Project Manager will review the stakes. The Contractor shall be held responsible for the proper preservation of all marks and stakes. If, in the opinion of the Project Manager, any marks or stakes have been willfully or carelessly disturbed or destroyed by the Contractor, its employees, or subcontractors, the cost of replacing them will be charged against the Contractor and be deducted from the final payment.

2.8. RIGHT OF ENTRY: At all times, the City shall have the right to enter and inspect the Project premises.

2.9. AUTHORITY AND DUTIES OF INSPECTORS:

2.9.1. All Work shall be subject to inspection and testing by the City at all reasonable times and at all places prior to acceptance. Inspectors, employed by the City, are authorized to inspect all Work done and all material furnished. Such inspection may extend to all of any part of the Work and to the preparation, fabrication, or manufacture of the materials to be used. The Inspector is not authorized to revoke, alter, or waive any requirements of the Plans and Specifications. The Inspector is authorized to call to the attention of the Contractor any failure of the Work or materials to conform to the Specifications and Contract Documents.

2.9.2. The Inspector shall have the authority to reject materials or suspend the Work until any question at issue can be referred to and decided by the Project Manager. If the Contractor refuses to suspend operations on verbal order, the Inspector shall issue a written order giving the reason for shutting down the Work. Work performed during the absence of the Inspector will not be accepted nor paid for by the City.

2.9.3. Inspections by the City or others shall not relieve the Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Documents and to also inspect its own Work.

2.9.4. Any plan of action, method of work or construction procedure suggested to the Contractor by the City or City contractors, whether orally or in writing, if adopted or followed by the Contractor in whole or in part, shall be at the sole risk and responsibility of the Contractor.

2.9.5. The Inspector shall neither act as foreman or perform other duties for the Contractor nor interfere with the management of the Work by the Contractor. Any advice which the Inspector may give the Contractor shall, in no way, be construed as binding to the Project Manager in any way or releasing the Contractor from fulfilling any of the terms of the Contract.

2.10. **INSPECTION:**

2.10.1. Until final payment, all parts of the work may be subject to inspection and testing by the City. The Contractor shall furnish, at its own expense, all reasonable access, assistance, and facilities required by the City for such inspection and testing. The Contractor shall furnish the Project Manager with every reasonable facility for ascertaining whether the Work performed and materials used are in accordance with the requirements and intent of the Specifications and Contract. In the event of night Work, the Contractor shall furnish proper lighting to adequately perform and inspect the Work being performed.

2.10.2. Upon request from the Project Manager, the Contractor shall, at any time before acceptance of the Work, remove or uncover such portion of the finished Work as may be directed. After examination, the Contractor may restore said portions of the Work to the standard required by the Specifications. Should the Work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the coverage or making good of the parts removed, may be paid for as Extra Work; but should the Work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed, shall be at the Contractor's expense. Any Work performed or materials used by the Contractor without suitable supervision or inspection by the City shall be ordered removed and replaced at the Contractor's expense.

2.10.3. If the Contractor does not promptly replace rejected material or correct rejected workmanship, the City may (a) by separate Contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor; or (b) terminate the Contractor's right to proceed in accordance with this Agreement pursuant to Section 4.10 of the General Conditions. Such inspection and test is for the sole benefit of the City and shall not relieve Contractor of the responsibility of providing quality control measures to assure that the Work strictly complies with the Contract. No inspection or test by the City shall be construed as constituting or implying acceptance. Inspection or test shall neither relieve Contractor of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of the City after acceptance of the completed Work.

2.10.4. Any Work outside the normal five (5) day, forty (40) hour week will require the Project Manager or Inspector on the job. All inspection so required shall be

done at the Contractor's expense and the cost thereof may be deducted from the final payment. Overtime inspection may be conducted by the City at the Contractor's expense at one hundred dollars and 00/100 (\$100.00) per hour. The payment by the Contractor of overtime inspection fees shall not relieve the Contractor from the liquidated damages provisions as specified in Section 4.8 of the General Conditions.

2.11. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK:

2.11.1. All Work which has been rejected or condemned by the City shall be repaired, or if it cannot be satisfactorily repaired, be removed and replaced at the Contractor's expense. At the Project Manager's discretion, the following unauthorized work shall neither be measured nor paid for by the City, and may need to be removed at the Contractor's sole expense:

- i. Work performed beyond the lines and grades shown on the Plans, or as given, except as herein provided; or
- ii. Work performed without giving timely notice to the Project Manager so the Project Manager may elect to be present to observe the Work in progress; or
- iii. Any Extra Work or unclassified Work performed without prior City written authority and price agreement.

2.11.2. If directed by the City, should the Contractor fail to satisfactorily repair or remove and replace rejected, unauthorized, or condemned Work immediately after receiving formal notice from the Project Manager, the City may, at its sole discretion, recover for such defective Work on the Contractor's Bond or by action in a court having proper jurisdiction over such matters, or the City may employ labor and equipment and satisfactorily repair or remove and replace such Work and charge the cost of the same to the Contractor, which cost will be deducted from any payments due to the Contractor.

2.12. SUPERVISION AND SUPERINTENDENCE:

2.12.1. The Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor shall be responsible to see that the completed work complies with the Contract Documents.

2.12.2. The Contractor shall designate and keep on any work site at all times during its progress, a competent superintendent who shall not be replaced without prior written notice to the Project Manager. The Contractor shall provide contact information for the superintendent who may be reached twenty-four (24) hours per day. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the

superintendent shall be as binding as if given to the Contractor. During periods when the Work is suspended, the Contractor shall make appropriate arrangements for any emergency work which may be required.

2.12.3. Whenever the superintendent is not present on any particular part of the Work where the Project Manager may desire to inform the Contractor relative to interpretation of the Plans and Specifications or to disapprove or reject materials or Work performed, the Project Manager may so inform the foreman or other worker in charge of the particular part of the Work in reference to which the information is given. Information so given shall be as binding as if given to the superintendent.

2.12.4. The Contractor will be supplied with four (4) copies of the Plans, and three (3) copies of the Specifications and Special Provisions. The Contractor shall have available on the work site at all times one copy each of said Plans, Specifications and Special Provisions, exclusive of the set designated for as-built drawings in Section 2.4 of the General Conditions. Additional copies of Plans, Specifications and Special Provisions can be obtained by the Contractor at the cost of reproduction.

SECTION 3 CONTROL OF MATERIAL

3.1. MATERIAL:

3.1.1. Unless otherwise indicated in this Contract, equipment, material and products incorporated in the Work covered by this Contract, shall be new and of the grade specified for the purpose intended. Unless otherwise specifically indicated, reference to equipment, material, product, or patented process by trade names, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may, with permission from the Project Manager, use any equipment, material, article, or process which is equivalent to that named, subject to the requirements of this Section.

3.1.2. Within the scope of their authority, the Project Manager shall be the sole judge of the quality and suitability of proposed alternative equipment, material, article or process. The burden of proving the quality and suitability of the alternative shall be upon the Contractor. Information required by the Project Manager in judging an alternative shall be supplied by the Contractor at the Contractor's expense.

3.2. APPROVAL AND ACCEPTANCE OF MATERIALS:

3.2.1. Samples of all materials to be tested may be taken by the Project Manager or their authorized representative at the discretion of the Project Manager. Materials may be sampled either prior to shipment or after being received at the work site. All

sampling, inspection, and testing shall be done in accordance with the Specifications contained in the Contract Documents.

3.2.2. The Contractor shall provide such facilities as the City may require for conducting field tests and for collecting and forwarding samples. The Contractor shall not use or incorporate into the Work any materials represented by the samples until tests have been approved by the City. Any material, which after approval, has for any reason become unfit for use, shall not be incorporated into the Work.

3.2.3. Tests or approvals by the Project Manager or others shall not relieve the Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Documents.

3.3. **CITED SPECIFICATIONS; SAMPLES AND TESTS:**

3.3.1. Except as otherwise provided, sampling and testing of all materials, and the laboratory sampling and testing of equipment required under these Specifications, shall be in accordance with the current edition of the American Society for Testing Materials ("ASTM") publication of standards, adopted and in effect on the date of the City's solicitation for bids.

3.3.2. When designated, sampling and testing of materials shall be in accordance with the current edition of the American Standards Association ("ASA") Specifications; the current edition of The American Association of State Highway and Transportation Officials ("AASHTO") publication Standard Specification for Highway Materials and Methods of Sampling and Testing; the current edition of the American Water Works Association Specifications; the current edition of the Federal Specifications or the current edition of MIL Specifications adopted and in effect on the date of City's solicitation for bids.

3.3.3. The testing of all samples and materials shall be made at the expense of the City, when specified herein as by the City, unless the tests reveal nonconformance in which case said costs shall be reimbursed by the Contractor to the City. The Contractor shall furnish the required samples without charge to the City. The Contractor shall give sufficient notification of the placing of orders for materials in order to permit the Project Manager to arrange for appropriate testing.

3.4. **STORAGE:** Materials shall be stored to insure the preservation of their quality and fitness for the Work. When necessary, they shall be placed on wooden platforms, or other hard, clean surfaces and not on the ground and shall be placed under cover when directed. Stored materials shall be located to facilitate prompt inspection.

3.5. **SUBSTITUTION OF MATERIALS AFTER AWARD OF CONTRACT:** Substitution of equipment and materials of makes and types other than those specified and/or those approved in advance by the Project Manager will be considered for approval only as hereafter provided:

- i. Proposed substitutes shall be equal or superior to items specified or previously approved.
- ii. The Contractor shall submit any requests on its letterhead in duplicate within two (2) weeks after the date of Contract execution. The request for substitutions shall include a complete written list submitted at one time and must be accompanied by a statement outlining reasons for each requested substitution. The request shall include catalog number, technical data, cuts diagrams and such other descriptive data or samples as may be required, and a detailed statement listing all significant details in which each item requested for approval differs from the item specified. Such listing or the failure to list such information shall not relieve the Contractor from providing properly functioning and/or fitting materials, regardless of the approval action taken by the Project Manager. If so requested by the Project Manager, the Contractor shall submit samples of both the specified material or equipment and the proposed substitute. In case of a difference in price, the City shall receive all benefits of the difference for any substitutions, and the Contract amount shall be altered by Change Order to credit the City with any savings so obtained.

3.6. DEFECTIVE MATERIALS: All materials not conforming to the requirements of the Specifications shall be considered defective. Whether in place or not, such material shall be removed immediately from the work site, unless otherwise permitted by the Project Manager. No rejected material, the defects of which have been subsequently corrected, shall be used without prior approval from the Project Manager. Upon failure of the Contractor to comply promptly with any order the Project Manager made under the provisions of this Section, the City shall have authority to remove defective materials and to deduct the cost of removal and replacement with specified materials from any moneys due or to become due to the Contractor, or said costs of removal and replacement may be recovered in any action by the City against the Contractor's Bond.

3.7. PROPERTY RIGHTS IN MATERIALS: The Contractor shall have no property right in materials after they have been attached, affixed or incorporated in the Work or the soil, or after payment has been made by the City to the Contractor for materials delivered to the work site or stored subject to or under the control of the City.

3.8. DAMAGE TO THE WORK AND RESPONSIBILITY FOR MATERIALS:

3.8.1. The Contractor shall be responsible for materials delivered and Work performed until completion and Final Acceptance of the entire construction thereof.

3.8.2. The Contractor shall bear the risk of injury, loss or damage to any and all parts of the Work for whatever cause, whether arising from the execution or from the non-execution of Work. The Contractor shall rebuild, repair or restore Work and materials which have been damaged or destroyed from any causes before completion and acceptance of the Work and shall bear the expense thereof. The

Contractor shall provide security and drainage and erect temporary structures as necessary to protect the Work and materials from damage.

- 3.8.3. The Contractor shall be responsible for materials not delivered to the work site for which any progress payment has been made to the same extent as if the materials were so delivered.

SECTION 4 PERFORMANCE AND PROGRESS

4.1. SUBCONTRACTING OR ASSIGNMENT OF WORK:

- 4.1.1. No contractual relationship will be recognized under the Contract other than the contractual relationship between the City and Contractor.
- 4.1.2. No portion of the Contract shall be subcontracted, assigned or otherwise disposed of except with the written consent of the City and Surety, which consent shall not be unreasonably withheld.
- 4.1.3. Requests for permission to subcontract, assign or otherwise dispose of any portion of the Contract shall be in writing to the Project Manager and shall be accompanied by documents demonstrating the organization which will perform the Work is particularly experienced and equipped for such Work. Consent to subcontract, assign or otherwise dispose of any portion of the Contract shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the Contract.

4.2. COMMENCEMENT OF WORK: The Contractor shall begin the Work within the prescribed amount of days set by the City in the written Notice to Proceed. The Contractor shall notify the Project Manager at least forty-eight (48) hours in advance of the time it intends to begin Work. Work shall be completed in the prescribed amount of days set by the City in the Contract Documents, including any Change Orders or amendment. The Contractor shall conduct Work in such a manner and with sufficient materials, equipment, and labor as is considered necessary to ensure its completion within the time limit set forth in the Contract. Should the prosecution of Work for any reason be discontinued by the Contractor, with the consent of the Project Manager, the Contractor shall notify the Project Manager at least forty-eight (48) hours in advance of resuming operations.

4.3. LIMITATION OF OPERATIONS: Each item of Work shall be performed to completion without delay and in no instance will the Contractor be permitted to transfer its force from uncompleted Work to new Work without the permission of the Project Manager. The Contractor shall not open up Work to the prejudice of Work already started.

4.4. PROGRESS SCHEDULE:

- 4.4.1. The Contractor shall prepare and submit to the Project Manager for approval five (5) days prior to the Preconstruction Conference, a practicable schedule, showing the order in which the Contractor proposes to carry on the Work, the date on which it will start the several salient features (including procurement of materials and

equipment) and the contemplated dates for completing the same. The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of Work scheduled for completion at any time. The Contractor shall enter on the chart the actual progress at such intervals as directed by the Project Manager and shall immediately deliver three (3) copies thereof. If the Contractor fails to submit a progress schedule within the time herein prescribed, the Project Manager may withhold approval of progress payment estimates until such time as the Contractor submits the required progress schedule.

4.4.2. The Contractor shall perform the Work in accordance with the latest approved progress schedule. If the progress of items along the critical path is delayed, the Contractor shall revise its planning to include additional forces, equipment, shifts or hours as necessary to meet the time or times of completion specified in this Contract. Additional costs resulting therefrom will be borne by the Contractor. The Contractor shall make such changes when progress at any check period does not meet at least one of the following two tests:

- i. The percentage of dollar value of completed Work with respect to the total amount of the Contract is within 10% (ten percent) of the percentage of the Contract time elapsed; or
- ii. The percentage of dollar value of completed Work is within 10% (ten percent) of the dollar value which should have been performed according to the Contractor's network analysis previously approved by the Project Manager.

4.4.3. Failure of the Contractor to comply with the requirements under this Section will be grounds for determination that the Contractor is not performing the Work with such diligence as will ensure completion within the time of completion specified in this Contract. Upon such determination, the City may terminate the Contractor's right to proceed with the Work, or any separate part thereof, in accordance with the provisions contained herein. The City may extend the time periods reflected by Section 4.4.2 (i) or (ii) above, if it does not reasonably reflect upon the Contractor's prosecution of the Work.

4.5. **CHARACTER OF WORKMEN AND EQUIPMENT:**

4.5.1. The Contractor shall employ such superintendents, foremen, and workmen as are careful and competent, and the Project Manager may demand the dismissal of any person employed or subcontracted by the Contractor in, about, or upon the Work who misconduct themselves or act incompetently or negligently in the proper performance of their duties, or neglects or refuses to comply with the directions given. Such person or subcontractor shall not be employed again thereon without the written consent of the Project Manager. Should the Contractor continue to employ, or again employ such person or subcontractor, the Project Manager may withhold all payments which are or may become due, or the Project Manager may suspend the Work until such orders are complied with.

4.5.2. In the employment of labor, preference shall be given, other conditions being equal, to residents of the area wherein the Work is being performed, but no other preference (except as may be required by special labor provisions) or discrimination among citizens of the United States shall be made. No convict labor shall be employed.

4.5.3. The Contractor shall furnish such equipment as is considered necessary for the prosecution of the Work in an acceptable manner and at a satisfactory rate of progress. All equipment, tools, and machinery used for handling materials and executing any part of the Work shall be subject to the approval of the Project Manager and shall be maintained in a satisfactory working condition. Equipment used on any portion of the Work shall be such that no injury to the Work, roadways, adjacent property, or other objects will result from its use. The Contract may be terminated if the Contractor fails to provide adequate equipment for the Work.

4.6. **TEMPORARY SUSPENSION OF WORK:** The City shall have the right to suspend, delay or interrupt the Work wholly or in part for such period as he may determine to be appropriate because of the failure on the part of the Contractor to properly perform the Work in accordance with the Contract, to carry out orders, or to remove defective material or Work. The Contractor shall not suspend the Work without written order given by the Project Manager, and prior to resuming Work shall give the Project Manager forty-eight (48) hours' prior notice to afford opportunity to reestablish supervision.

4.7. **DETERMINATION AND EXTENSION OF CONTRACT TIME FOR COMPLETION:**

4.7.1. The Contractor shall perform fully, entirely, and in a satisfactory and acceptable manner the Work, within the number of days stipulated in the Contract. Time will be assessed against the Contractor beginning with the actual date the Work is started in accordance with the Notice to Proceed. If the Contractor does not begin the Work within the limit as designated in the Notice to Proceed, the days shall start on the first day after the expiration of the limit as stated in the Notice to Proceed.

4.7.2. In adjusting the Contract time for the completion of the Project, all strikes, lockouts, unanticipated delays in transportation or any condition over which the Contractor has no control, and any suspensions ordered by the City for causes not the fault of the Contractor, shall be excluded from the computation of the Contract time for completion of the Work and the City may extend the time for completion in such amount as the conditions justify. In order to secure an extension of time for delays beyond its control, the Contractor, shall within 10 (ten) days from the beginning of any such delay, notify the Project Manager in writing of the causes of delay, where upon the Project Manager shall ascertain the facts and the extent of the delay and extend the time for completing the Work when, in their judgment, the findings of fact justify such an extension, and their finding of fact thereon shall be final and

conclusive. No allowances will be made for delays or suspensions of the performance of the Work which are in the control of the Contractor.

- 4.7.3. If the satisfactory execution and completion of the Contract shall require Work or materials in greater amounts or quantities than those set forth in the Contract, then the Contract time shall automatically be increased in the same proportion as the cost of the additional Work bears to the original Work contracted for.

4.8. FAILURE TO COMPLETE WORK ON TIME:

- 4.8.1. The City and Contractor agree and recognize that time is of the essence for every time period set forth in the Contract Documents and that the City will suffer financial loss if the Work is not substantially complete within the time set forth in the Contract Documents. If the Contractor fails to fully perform and complete the Work in conformity with the provisions and conditions of the Contract within the specified time limit for such performance and completion, or within such further time as, in accordance with the provision of this Contract, shall be fixed or allowed for such performance and completion, the City and Contractor agree that as liquidated damages, and not as a penalty, for the delay in performance, the Contractor shall pay to the City the amount stipulated below for each and every calendar day that expires after the time set forth in the Contract Documents until the same is finally complete and ready for final payment as provided herein.

Original Contract Amount	Amount of Liquidated Damages Per Day
Less than \$100,000	\$300.00
\$100,000 and less than \$500,000	\$600.00
\$500,000 and less than \$1,000,000	\$1,000.00
\$1,000,000 and over	\$1,500.00

- 4.8.2. The City shall recover inspection charges and damages by deducting the amount thereof out of any moneys which may be due or may become due to the Contractor, and/or by an action at law against the Contractor or its Surety. It is understood and agreed that aside from any other penalty or damage, all costs of the Project Manager and inspection on behalf of the City may be charged to the Contractor and be deducted from any estimate or payment otherwise due and payable.
- 4.8.3. If the Contractor fails to pay such liquidated damages promptly upon demand therefor, the Surety shall pay such damages. In addition, and at the City's option, the City may withhold all or any part of such liquidated damages from any payment due the Contractor.

4.9. ADJUSTMENT FOR SUSPENDED WORK:

- 4.9.1. In the event the Contractor is ordered by the City, in writing, to suspend Work for some unforeseen cause not provided for in the Contract, and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the job during the period of shutdown. No allowance will be made for lost profits. The period of shutdown shall be computed from the date set out in the written order for Work to cease until the date of the written order for Work to resume. Claims for such compensation shall be filed with the City within 10 (ten) days of the date of written order to resume Work, or such claims will not be considered. The Contractor shall submit with its claim substantiating papers covering the entire amount shown on the claim. The City shall take the claim under consideration, and may make such investigations as are deemed necessary, and shall be the sole judge as to the equitability of such claim and such decision shall be final.
- 4.9.2. Notwithstanding any provisions of this Contract to the contrary, no provision of this Section shall be construed as entitling the Contractor to compensation for delays due to inclement weather, delays due to failure of the Surety, for suspensions made at the request of the Contractor, or for any other delay provided for in the Contract Documents, Specifications, Special Provisions, Bid Schedule, Contract, Change Order or Field Order.

4.10. TERMINATION OF CONTRACT FOR DEFAULT:

- 4.10.1. The occurrence of any one or more of the following shall constitute an "Event of Default" of the Contract, for which the City may, at the City's option, terminate the Contract upon written notice to the Contractor:
- i. The Contractor fails to start the Work on the date given in the Notice to Proceed, or the Contractor in any way abandons the Work;
 - ii. The Contractor's progress is insufficient to complete the Work within the specified time;
 - iii. The Contractor's willful or deliberate failure or violation to comply with any requirement of the Contract, including the Plans and Specifications and Special Provisions, or execution of Work by the Contractor in bad faith or otherwise not in accordance with its obligations;
 - iv. The Contractor fails to maintain any required Bonds, licenses, permits, and/or insurance as required in the Contract;
 - v. The Contractor fails to promptly repair, replace or remove any defects in materials or Work or any defects in materials or Work of any other nature, the correction of which has been directed in writing by the Project Manager;
 - vi. Substantial evidence of the Contractor's collusion for the purpose of illegally procuring a Contract or perpetrating fraud in the construction of Work;
 - vii. The Contractor files a voluntary petition in bankruptcy if a receiver is appointed for the Contractor or any of its property, or the insolvency of the Contractor;

- viii. The Contractor allows any final judgment against it unsatisfied for a period of 10 (ten) days or longer, and makes an assignment for the benefit of creditors;
- ix. The Contractor or any of its officers or employees are convicted, plead nolo contendere, enter into a formal agreement in which they admit guilt, enter a plea of guilty, or otherwise admit culpability to criminal offenses of bribery, kickbacks, collusive bidding, bid-rigging, anti-trust, fraud, undue influence, theft, extortion, or any offense of similar nature, in connection with the Contractor's business;
- x. Other just causes for termination as determined by the City.

4.10.2. The City shall provide the Contractor and Surety with written notice of the City's intent to terminate. The Contractor and/or Surety shall have 10 (ten) days from receipt of notice to cure any default or to provide to the City a detailed plan, in writing, of how the Contractor will cure the causes for termination listed within the written notice. If a satisfactory effort has not been made by the Contractor or its Surety to correct the default within the prescribed period in the notice, or, if in the judgment of the City, any submitted written plan does not ensure satisfactory performance of the Work, the City may declare the Contract terminated and notify the Contractor and its Surety accordingly. Upon receipt of notice from the City that the Contract has been terminated, the Contractor shall immediately discontinue all operations. The City may then proceed with the Work in any lawful manner that it elects until completion.

4.10.3. The City reserves the right to take possession of any machinery, implements, tools, or materials of any description that shall be found upon the Work, to account for said equipment and materials, and to use the same to complete the Project. When the Work is thus finally completed, the total cost of the same will be computed. If the total cost is more than the Contract price, the difference shall be paid to the City either by the Contractor or its Surety. In case of termination, all expenses incident to ascertaining and collecting losses under the Bond, including City project management and legal services, shall be assessed against the Bond.

4.11. **TERMINATION FOR CONVENIENCE OF THE CITY:** This Contract and the performance of the Work hereunder may be terminated at any time, in whole or in part, for convenience. Any such termination shall be effected by delivery to the Contractor of a written notice ("Notice of Termination") specifying the extent to which performance of Work is terminated, the date upon which termination becomes effective, and any necessary actions to be taken by the Contractor to effectuate termination and close-out the Contract. If the Contract is terminated, the Contractor shall be paid on a prorated basis of Work satisfactorily completed, under the Work. The portion of Work satisfactorily completed but not yet accepted by the City shall be determined by the City.

4.12. **COOPERATION WITH OTHER CONTRACTORS:** In connection with the improvements under this Contract, the right is reserved by the City to award any Work not included in the Contract to another contractor for performance during the progress of this Contract, or to perform such Work with the City's forces, and the Contractor shall cooperate and so conduct its operation as to minimize the interference therewith, as directed by the Project Manager.

4.13. **TERMINATING OF CONTRACTOR'S RESPONSIBILITY:** This Contract will be considered complete when all Work and final cleanup has been finished, the Work has been accepted by the City, and all claims for payment of labor, materials, or services of any kind used in connection with the Work have been settled for by the Contractor or its Surety. The Contractor will then be released from further obligation except as set forth in the Bond and for its responsibility for injury to persons or property arising from its duties and obligations under Section 7 of the General Conditions. The Bond executed for performance of this Contract shall be in full effect for a period of one (1) year following acceptance of the Work; except with regard to the representation regarding copyright infringement found in Section 6.4 the Bond shall remain in effect for three (3) years, and except with regard to the representation regarding patent infringement found in Section 6.4 the Bond shall remain in effect for six (6) years. Neither the final payment nor any provision in the Contract Documents shall relieve the Contractor of the responsibility for negligence or faulty materials or workmanship. The Contractor shall warrant its work to be free from faulty materials or workmanship for the period of two (2) years after Final Acceptance, and upon written notice, the Contractor shall remove any defect due thereto and pay for any damage due to other Work resulting there from which shall appear within the two-year period. Remedied Work shall carry the same warranty as the original Work starting with the date of acceptance of the replacement or repair. Payment to the Contractor will not relieve the Contractor of any obligation under this Contract.

SECTION 5 WARRANTY

5.1. SCOPE OF WARRANTY:

5.1.1. The Contractor warrants that the Work and all of its components shall be free from defects and flaws in design, workmanship, and materials; shall strictly conform to the requirements of this Contract; and shall be fit, sufficient and suitable for the purposes expressed in, or reasonably inferred from, this Contract. The warranty herein expressed shall be in addition to any other warranties expressed or implied by law, which are hereby reserved unto the City. In all emergencies the Contractor shall immediately remedy, repair, or replace, without cost to the City and to the entire satisfaction of the City, defects, damages or imperfections due to faulty materials or workmanship appearing in said Work within said period of not less than two (2) years from the date of Final Acceptance. Remedied Work shall carry the same warranty as the original Work starting with the date of acceptance of the replacement or repair. Payment to the Contractor will not relieve the Contractor of any obligation under this Contract.

- 5.1.2. The Contractor, at no additional expense to the City, shall also remedy damage to equipment, the site, or the buildings or the contents thereof which is the result of any failure or defect in the Work, and restore any Work damaged in fulfilling the requirements of the Contract. Should the Contractor fail to remedy any such failure or defect within a reasonable time after receipt of notice thereof, the City will have the right to replace, repair, or otherwise remedy such failure or defect at the Contractor's expense.
- 5.1.3. Subcontractors', manufacturers', and suppliers' warranties and guarantees, expressed or implied, respecting any part of the Work and any material used therein shall be deemed obtained and shall be enforced by the Contractor for the benefit of the City without the necessity of separate transfer or assignment thereof.
- 5.1.4. The rights and remedies of the City provided in this Section are in addition to and do not limit any rights and remedies afforded by the Contract or by law. The Contractor specifically waives all the provisions of Chapter 8 of Article 20 of Title 13, C.R.S. regarding defects in the Work under the Contract.
- 5.2. **CITY'S RIGHT TO CORRECT:** If, within five (5) business days after the City gives the Contractor notice of any defect, damage, flaw, unsuitability, nonconformity, or failure to meet warranty subject to correction by the Contractor, or if the Contractor neglects to make, or undertake with due diligence to make the necessary corrections, then the City shall be entitled to make, either with its own forces or with contract forces, the corrections and to recover from the Contractor all resulting costs, expenses, losses, or damages, including attorneys' fees and administrative expenses.
- 5.3. **WARRANTY PERIOD:** Except where longer periods of warranty are indicated for certain items, the Contractor warrants Work under the Contract to be free from faulty materials and workmanship for a period of not less than two (2) years from date of Final Acceptance, with one (1) of those years being covered by the Bond, as specified in this Contract. In cases of warranty work, which is not an emergency, all necessary repairs shall be made within a reasonable time not to exceed twenty (20) days after notice of the required repair is received by the Contractor. For those items of warranty work which cannot be completed within said twenty (20)-day period, the Parties shall negotiate a reasonable period of time.

SECTION 6

LEGAL RELATIONSHIP AND RESPONSIBILITY TO THE PUBLIC

- 6.1. **LAWS TO BE OBSERVED:** The Contractor shall at all times observe and comply with all Federal, State and local laws, codes, ordinances, and regulations, which pertain to and affect the conduct of the Work, and the Contractor and its Surety shall indemnify and save harmless the City and all its officers, agents, employees, or any of their heirs, successors or assigns against any claim, judgment, demand, costs, liability or expenses, including but not limited to attorney's fees and costs of suit arising from or based on the

violation of any such law, ordinance, regulations, order, or decree, whether such claim, judgment, demand, costs, liability or expenses arises from actions by the Contractor, its employees, agents or subcontractors. Nothing contained herein shall be deemed to create liability for the Contractor for any design defects not managed by the Contractor.

6.2. PERMITS AND LICENSES: The Contractor shall, at its own expense, procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the Work. Any costs incurred for these permits must be included in the unit costs.

6.3. PAYMENT OF TAXES:

6.3.1. With the exception of being exempt from City of Littleton Sales and Use taxes, the Contractor shall pay all sales and use taxes required to be paid, shall maintain such records in respect to its Work, which shall be separate and distinct from all other records maintained by the Contractor and shall be available for inspection by the City at any and all reasonable times, and shall furnish the City with such data, as may be necessary to enable the City to obtain any refunds of such taxes which may be available to the City under the laws, ordinances, rules or regulations applicable to such taxes. The Contractor shall require each of its subcontractors to pay all sales and use taxes required and to maintain such records and furnish the Contractor with such data as may be necessary to enable the City to obtain a refund of the taxes paid by such subcontractors.

6.3.2. In accordance with C.R.S. §§ 39-26-114 and 39-26-203, and the related regulation of the State of Colorado Department of Revenue, the Contractor shall apply to the State of Colorado Department of Revenue and secure prior to commencing Work, an exemption certificate which when issued by the State of Colorado Department of Revenue will enable the Contractor to purchase all materials free of State Sales and Use Taxes and Regional Transportation District ("RTD") Tax, provided that any building permit fee shall be included in any Bid Schedule with respect to the Work. Further, no Littleton sales and/or use tax shall be included in any billing with respect to the Work. This provision shall apply to all contractors, subcontractors and material suppliers. When Littleton sales tax is paid to licensed Littleton vendors for materials, which become part of the Work by a Contractor, the City of Littleton will refund that tax to the Contractor upon receipt of an application from the Contractor at the conclusion of the Contract. Accompanying the application must be the material receipt(s) displaying a description of the item(s) purchased, date of purchase, amount of purchase, tax paid and any other documentation and information which may be required by the City to substantiate the payment and validate a refund.

6.3.3. Contractors who purchase materials that become part of the Work that do not honor the exemption, and thereby who pay sales tax, will not be reimbursed for that tax payment by the City. The Contractor shall bear the risk of any added or increased taxes occurring during the performance of the Work. A change in taxes

shall under no circumstances entitle the Contractor to an adjustment under the Contract.

6.4. PATENTED DEVICES, MATERIALS AND PROCESSES: If the Contractor is required or desires to use any design, device, material or processes covered by patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the patentee or patent owner. The Contractor shall warrant that the materials, equipment or devices used on or incorporated in the Work shall be delivered free of any rightful claim of any third-party for infringement of any United States patent or copyright. If notified promptly in writing and given authority, information and assistance, the Contractor shall defend, or may settle, at its expense, any suit or proceeding against the City so far as based on a claimed patent or copyright infringement which would result in a breach of this warranty, and the Contractor shall pay all damages and costs awarded therein against the City due to such breach. In case any use of any materials, equipment or devices is in such suit held to constitute an infringement and such use is enjoined, the Contractor shall, at its expense and option, either procure for the City the right to continue using said materials, equipment or devices, or replace same with non-infringing materials, equipment or devices, or modify the same so it becomes non-infringing. The Contractor shall report to the City promptly and in reasonable written detail each notice or claim of patent or copyright infringement based on the performance of this Contract of which the Contractor has knowledge. In the event of any claim or suit against the City as a result of any alleged patent or copyright infringement arising out of the performance of this Contract or out of the use of any supplies furnished or Work or services performed hereunder, the Contractor shall furnish to the City when requested by the City, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the City except where the Contractor has agreed to indemnify the City. This clause shall be included in all subcontracts.

6.5. SANITARY PROVISIONS: The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees as may be necessary to comply with the requirements and regulations of the State Department of Health and the Occupational Safety and Health Administration ("OSHA"). As stated in OSHA Construction Standard 1926.51 C, the Contractor shall supply temporary sanitary facilities as per the following table:

<u>Number of Employees</u>	<u>Minimum Toilet Facilities</u>
20 or less	1 Toilet
21 to 50	1 Toilet and 1 Urinal per 40 workers
51 or more	1 Toilet and 1 Urinal per 50 workers

This requirement to provide sanitary facilities will neither be measured nor paid for separately by the City, but shall be considered incidental to and included in the cost of the Work.

6.6. PUBLIC CONVENIENCE AND SAFETY:

- 6.6.1. The Contractor shall be solely and completely responsible for conditions of the Work site, including safety of all persons and property during performance of the Work. The Contractor shall fully comply with all applicable Federal, State and local laws, and rules and regulations governing safety of the public and workers. The Contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions on its own responsibility reasonably necessary to protect the life and health of employees on the job and the safety of the public, and to protect property in connection with the performance of the Work. Materials stored on the site shall be so placed and the Work shall, at all times, be so conducted as to cause no greater obstruction to traffic than is considered necessary by the Project Manager.
- 6.6.2. The Contractor shall not close any road to the public except by the express permission of the City. When the improvement under construction is being used by the traveling public, special attention shall be paid to keeping both the sub-grade and surfacing in such condition that the public can travel in comfort and safety. The Contractor shall cooperate with the Project Manager in the regulation of traffic. If the Contractor constructs temporary bridges or temporary stream crossings, the Contractor's responsibility for accidents shall include the roadway approaches as well as the structures of such crossing.
- 6.6.3. The right of the Project Manager to conduct construction review or observation of the Contractor's performance will not include review or observation of the adequacy of the Contractor's safety measures in, on, or near the Work site.

6.7. BARRICADES, SIGNS AND HAZARD MARKINGS:

- 6.7.1. The Contractor shall provide, erect and maintain all necessary barricades, signs, danger signals and lights for the protection of the Work and the safety of the public. All barricades, signs and obstructions erected by the Contractor shall be illuminated at night and all devices for this purpose shall be kept illuminated from sunset to sunrise.
- 6.7.2. The Contractor shall be held responsible for all damage to the Work due to failure of barricades, signs, lights and watchman to protect it, and whenever evidence of such damage is found prior to acceptance, the Project Manager may order the damaged portion immediately removed and replaced by the Contractor without cost to the City if, in the opinion of the Project Manager, such action is justified. The Contractor's responsibility for the maintenance of barricades, signs and lights shall not cease until Work has been accepted.

- 6.8. **USE OF EXPLOSIVES:** When the use of explosives is necessary for the Work, the Contractor shall use the utmost care so as not to endanger life or property, and whenever directed by the Project Manager the number and size of the charges shall be

reduced. The Contractor shall notify the proper representatives of any public services corporation, the City, any company, or any individual at least eight (8) hours in advance of any blasting which may damage property on, along, or adjacent to the site. The Contractor shall comply with the requirements of Title 9, Article 7 of the C.R.S., as amended, titled "Explosive Permits". The Contractor shall also be required, at a minimum, to notify the Littleton Fire Department and the Littleton Police Department. All explosives shall be stored in a secure manner and all storage places shall be marked clearly "DANGEROUS EXPLOSIVES," and shall be in care of competent watchmen at all times.

6.9. PROTECTION AND RESTORATION OF PROPERTY:

- 6.9.1. The Contractor shall not enter upon private property for any purpose without first obtaining permission, and shall be responsible for the preservation of all public and private property, sod, trees, fences, monuments, underground structures, etc., on and adjacent to the site(s) and shall use every precaution necessary to prevent damage or injury thereto. The Contractor shall protect carefully, from disturbance or damage, all land monuments and property markers until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.
- 6.9.2. The Contractor shall be responsible for all damage or injury to property of any character resulting from any act, omission, neglect or misconduct in his manner, or method of executing said Work, or due to its non-execution of said Work, or at any time due to defective Work or materials, and said responsibility shall not be released until the Work has been completed and accepted by the City.
- 6.9.3. The Contractor's attention is directed to the importance of protecting all public utilities encountered on all projects. Such utilities may include, but are not limited to, telephone, telegraph and power lines, water lines, sewer lines, gas lines, railroad tracks, and other overhead and underground utilities, cable television lines and facilities. Before any excavation is to begin in the vicinity of water lines, railroad tracks or structures, sewer lines, cable television lines, gas lines or telephone conduits, each utility company concerned must be notified in advance of such excavation, and such excavation shall not be made until an authorized representative of the utility company concerned is on the ground and has designated the location of their facilities.
- 6.9.4. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the Work, or in consequence of the non-execution thereof on the part of the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done by repairing, rebuilding, or otherwise restoring, as may be directed; or the Contractor shall make good such damage or injury in an acceptable manner. In case of the failure on the part of the Contractor to restore such property, or to have started action to make good such damage or injury, the City may upon forty-eight

(48) hours' notice, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary and the cost thereof will be deducted from any moneys due or which may become due the Contractor under the Contract or prosecuted as a claim against the Contractor's Bond.

6.9.5. The cost of insurance for damages due to Contractor's operation or cost of protecting utilities where required to permit construction under this Contract shall be included in the original Contract prices for the Work.

6.10. **INDEMNIFICATION AND HOLD HARMLESS:** The Contractor and its Surety shall indemnify and save harmless the City, its officers, agents, employees, successors and assigns from all suits, demands, actions, or claims of any nature whatsoever brought or made against the City, its officers, agents, employees, successors or assigns from any injuries or damages sustained by any person, firm or corporation or property or resulting from or arising out of any neglect in safeguarding the Work; or through the use of unacceptable materials in the construction of the improvement; or as a result of any act or omission by the Contractor; or from the use, misuse, storage or handling of explosives; or on account of any claims or amounts recovered for any infringement of patent, trademark or copyright; or from any claims or amounts arising or recovered under Worker's Compensation laws, or any other law, by-law, ordinance, order or decree. Moneys due to the Contractor under and by virtue of the Work, as shall be considered necessary by the City, may be retained, or in case no money is due, the Contractor's Bond shall be held until such suit(s), action(s), or claim(s) for injuries or damages have been settled and satisfactory evidence has been furnished to the City.

6.11. **NO PERSONAL LIABILITY OF THE PROJECT MANAGER:** The Project Manager is an agent of City, and the Project Manager, its agents, heirs, successors and assignees shall have no liability to any third-party as a result of performance of this Contract.

6.12. **NO WAIVER OF LEGAL RIGHTS:** Inspection by the Project Manager or authorized City representatives, payment of money, payment for or acceptance of any Work or any extension of time, or possession taken by the City shall not operate as a waiver of any provision of the Contract, or any power therein provided. A waiver of any breach or term of the Contract shall not be deemed to be a waiver of any other or subsequent breach. The City reserves the right to correct any error that may be discovered in any estimate that may have been paid, and to adjust the same to meet the requirements of the Contract and Specifications. The City reserves the right to claim and recover, by process of law, sums as may be sufficient to correct any error or make good any deficit in the Work resulting from such error, dishonesty, or collusion discovered in the Work after the final payment has been made.

6.13. **RIGHTS-OF-WAY:** The City shall furnish all lands and rights-of-way required for completion of the Work. In acquiring rights-of-way, the City will proceed as expeditiously as possible, but in the event all rights-of-way or easements are not acquired prior to the beginning of construction, the Contractor shall begin Work on such lands and rights-of-

way as have been acquired. No claim for damage will be allowed or shall be made by reason of the City's delay in obtaining lands, easements or rights-of-way. In the event of litigation or other delays in acquiring rights-of-way, the time allowed herein for completion will be extended to compensate for the time actually lost by such delay.

SECTION 7 MEASUREMENT AND PAYMENT

7.1. BONDS.

7.1.1. Contemporaneous with the Contractor's execution of this contract, the Contractor shall provide a Performance Bond and a Labor and Material Payment Bond as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. All bonds shall be in the form prescribed by the City, executed by a surety company i) licensed to do business in the State of Colorado; ii) with a general rating of A and a financial size category of Class X or better in Best's Insurance Guide, each in the penal sum of the contract price; and iii) in conformance with C.R.S. §§ 38-26-105 and 106 ("Bonds"). All Bonds signed by an agent or attorney-in-fact shall be accompanied by a certified copy of the signatory's authority to act. The Contractor shall, at all times while providing, performing, or completing the Work including without limitation at all times while correcting any failure to meet warranty pursuant to Section 5 of the General Conditions, maintain and keep in force the Bonds at the Contractor's expense.

7.1.2. If the Surety for any Bond furnished by the Contractor is placed in a receivership or declared bankrupt, or its rights to do business in Colorado are terminated, or it ceases to meet the requirements specified herein, the Contractor shall within five (5) days thereafter substitute another Bond and Surety, both of which shall be acceptable to the City.

7.2. **MEASUREMENT OF WORK PERFORMED:** The determination of the amount of Work acceptably completed under the terms of the Contract, or as directed by the Project Manager in writing, will be made by the Project Manager based on measurements taken by them or their authorized representatives. These measurements will be taken according to the United States standard measure. All surface and linear measurements will be taken horizontally unless otherwise shown on Plans or otherwise specified. Structures shall be measured to the neat lines as shown on the Plans, or as directed in writing by the Project Manager.

7.3. SCOPE OF PAYMENT:

7.3.1. The Contractor shall accept the compensation, as herein provided, in full payment for furnishing all materials, equipment, labor, tools, and incidentals necessary to complete the Work and for performing all Work contemplated and embraced under the Contract; for loss or damage arising from the nature of the Work, or from the

action of the elements, or from any unforeseen difficulties which may be encountered during the completion of the Work until the final acceptance by the City; for all risks of every description connected with the completion of the Work; for all expenses incurred in consequence of the suspension or discontinuance of the Work as herein specified; for any infringement of patent, trademark, or copyright; and for completing the Work according to the Plans and Specifications. Neither the payment of any partial payment nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective Work or material. No moneys payable under the Contract or any part thereof, except the partial payment for the first month period, shall become due and payable until the Contractor satisfies to the City that it has fully settled or paid for all materials and equipment used in or upon the Work and labor done in connection therewith. The City, if it so elects, may pay any or all such bills, wholly or in part, and deduct the amount or amounts so paid from any monthly or final partial payment excepting the first estimate.

7.4. PAYMENT FOR INCREASED OR DECREASED QUANTITIES: When alterations in the Plans or quantities of Work are ordered and performed without a written Change Order or amendment, the Contractor shall accept payment in full at the Contract unit price for the actual quantities of Work done, and only upon the City's review and approval of said Work. No allowance will be made for lost profits. Increased or decreased Work without a written Change Order will be paid for as stipulated herein.

7.5. PAYMENT FOR OMITTED ITEMS:

7.5.1. For any item omitted from the Work, the City will pay the Contractor a fair and equitable amount for costs incurred directly related to such item prior to the date of the City's order to omit the item, subject to Section 1.4 of the General Conditions. No allowance will be made for lost profits in reimbursements to the Contractor for omitted items of Work. Acceptable materials ordered by the Contractor or delivered to the Work site prior to the date of cancellation, alteration, or suspension of the Work by order of the Project Manager will be paid for at the actual cost to the Contractor and shall thereupon become the property of the City.

7.5.2. The Contractor shall immediately submit certified statements covering all money expended in preparation for any omitted item, and shall be reimbursed for any money expended in preparation for Work on any omitted item when such preparation has no value to the remaining items of the Contract, or for a proportionate amount based on the total Contract price over which such preparation would ordinarily be distributed when other items are included in such preparation.

7.6. EXTRA AND FORCE ACCOUNT WORK:

7.6.1. Extra Work, for which no price is provided in the Bid Schedule, shall be covered by Change Order to be signed by both Parties before such Work is commenced.

Extra Work will be paid for either at a lump sum, or unit prices agreed upon, or on a Force Account basis, subject to Section 1.5 of the General Conditions. For all labor, teams, and foremen in direct charge of the specific operations accomplished on a Force Account basis, the Contractor shall receive the current local rate of wage, to be agreed upon before starting the Work, to which shall be added 15% (fifteen percent) of the sum thereof to cover cost of supervision, the rental of small tools and ordinary equipment, additional Bond, Unemployment Insurance, all overhead and any other costs not specifically stated. In addition, the Contractor shall be paid a sum equal to the Worker's Compensation insurance premium, the actual costs of Social Security taxes computed on the base rate for the class of Work involved for the actual amount of the payroll, and the public liability and property damage insurance premium; provided, however, that nothing in this Section will change the legal status of the relationship between the Parties to this Agreement. For all materials furnished and used by the Contractor on a Force Account basis, the Contractor shall receive the actual cost of such materials, including transportation charges as shown by original receipted bills, to which shall be added 15% (fifteen percent) of said actual cost.

- 7.6.2. For machine power tools or equipment, including fuel and lubricant, used on Force Account Work, payment for the same will be made on a rental basis at the rate agreed upon between the Contractor and the Project Manager, to which rate no percentage shall be added.
- 7.6.3. The compensation as herein provided shall be received by the Contractor as payment for Extra Work done on a Force Account basis and subject to any conditions or limitations as specified in Section 1.5 of the General Conditions. The Contractor shall make no claim for Force Account Work, unless performed on written order and in accordance therewith. The Contractor's representative and the Inspector shall compare records of Extra Work done on a Force Account basis at the end of each day. Copies of these records shall be made upon suitable forms provided for this purpose and signed by both the Inspector and the Contractor's representative, one copy being forwarded to the Project Manager and one copy to the Contractor.
- 7.6.4. All claims for Extra Work done on a Force Account basis shall be submitted each month to the Project Manager by the Contractor upon certified statements, or upon forms furnished by the City. Work performed prior to a written order by the Project Manager will not be paid for.

7.7. PARTIAL PAYMENTS:

- 7.7.1. Partial progress payments shall be made by the City to the Contractor for the percentage of the Work completed, subject to inspection and approval by the Project Manager. The City shall determine when work has been completed, and progress payments shall not constitute a waiver of the City's right to require fulfillment of all terms of the Contract Documents and the delivery of all Work

contemplated herein, complete and satisfactory to the City.

- 7.7.2. Once per month as the Work progresses, the Project Manager will make an estimate of the value of the Work performed and materials completed and in-place or delivered to the Work site in accordance with the Contract. Upon the Project Manager's request, the Contractor shall furnish a detailed estimate of the total Contract price showing the amount included therein for each category of Work, to provide a basis for determining the amount of progress payments. The market value of materials and equipment delivered to the Work site but not yet incorporated in the Work may, at the discretion of the City, be included with a progress payment. However, payment by the City for such materials and equipment shall not relieve the Contractor of the responsibility for the care of such materials and equipment; the City shall not be deemed to have assumed ownership of the materials or equipment until incorporated into the completed and accepted Work. Such increases to progress payments, if authorized, are intended only to reduce the cost of doing business with the City.
- 7.7.3. In accordance with C.R.S. § 24-91-103, where the Contract price exceeds one hundred fifty thousand dollars (\$150,000.00), partial payments shall be authorized at the end of each calendar month, or as soon thereafter as practicable, to the Contractor upon satisfactory performance of the Contract. The City shall, from the total of the Contract estimate so ascertained, deduct an amount equivalent to five (5) percent of the whole, to be retained by the City until acceptance of the entire Contract and the balance of the sum equivalent to 95% (ninety-five percent) of the whole, shall be certified to by the Project Manager for payment.
- 7.7.4. The City shall retain from all progress payments an amount equal to all statutory claims filed against the Contractor pursuant to C.R.S. § 38-26-107. No partial payments except final payment will be made for a sum less than one thousand dollars (\$1,000.00). The estimates will be approximate only, and all partial or monthly estimates and payments shall be subject to correction in the estimate and payment rendered following discovery of an error in any previous estimates or payments. Should any defective Work or material be discovered, or should a reasonable doubt arise as to the integrity of any part of the Work completed previous to the final acceptance and payment, the costs shall be deducted from the first payment rendered after the discovery of such Work an amount equal in value to the defective or questioned Work, and this Work will not be included in a subsequent estimate or payment until the defects have been remedied or the causes for doubt removed.
- 7.8. **PUNCH LIST AND FINAL ACCEPTANCE.** The Work shall be finally accepted when, and only when, the whole and all parts thereof shall have been completed to the satisfaction of City in full compliance with, and as required by or pursuant to, this Contract. Upon receipt of the Contractor's Written Notice of Completion, the City shall make a review of the Work and notify the Contractor in writing of all Punch List Work, if any, to be completed or corrected. Following the Contractor's completion or correction of all Punch

List Work, the City shall review the Work and prepare and deliver to the Contractor either a written notice of additional Punch List Work to be completed or corrected or a written notice of Final Acceptance of the Work.

7.9. ACCEPTANCE AND FINAL PAYMENT:

7.9.1. Two (2) weeks after acceptance of the Work including final cleanup, the City shall initiate the acceptance and final payment procedures. All prior partial estimates and payments shall be subject to correction in the final estimate and payment. Upon completion of the acceptance and final payment procedures, the Work will be considered accepted, the Contract considered complete, and, upon compliance with the provisions of State law, the final payment shall be executed and submitted to the Contractor.

7.9.2. The acceptance by the Contractor of the last payment as aforesaid shall operate as and shall be a release of the City from all claims for liability arising from the performance of the Work under the Contract, excepting any claims that may arise during the warranty period.

7.10. LIENS.

7.10.1. *Title.* Nothing in this Contract shall be construed as vesting in the Contractor any right of property in any equipment, materials, supplies, and other items provided under this Contract after they have been installed in, incorporated into, attached to, or affixed to, the Work or Work site. All such equipment, materials, supplies, and other items shall, upon being so installed, incorporated, attached or affixed, become the property of the City, but such title shall not release the Contractor from its duty to insure and protect the Work in accordance with the requirements of this Contract.

7.10.2. *Waivers of Lien.* The Contractor shall, from time to time at the City's request and in any event prior to final payment, furnish to the City such receipts, releases, affidavits, certificates, and other evidence as may be necessary to establish, to the reasonable satisfaction of the City, that no lien against the work or the public funds held by the City exists in favor of any person whatsoever for or by reason of any equipment, material, supplies, or other item furnished, labor performed, or other thing done in connection with the Work or this Contract ("Lien"), and that no right to file any Lien exists in favor of any person whatsoever.

7.10.3. *Removal of Liens.* If at any time any notice of any Lien is filed, the Contractor shall, promptly and without charge, discharge, remove, or otherwise dispose of such Lien. Until such discharge, removal, or disposition, the City shall have the right to retain from any money payable hereunder an amount that the City, in its sole judgment, deems necessary to satisfy such Lien and to pay the costs and expenses, including attorneys' fees and administrative expenses, of any actions brought in connection therewith or by reason thereof.

7.10.4. *Protection of City Only.* This Section shall not operate to relieve the Contractor's Surety or Sureties from any of their obligations under the Bonds, nor shall it be deemed to vest any right, interest, or entitlement in any subcontractor or supplier. The City's retention of funds pursuant to this Section shall be deemed solely for the protection of its own interests pending removal of such Liens by the Contractor, and the City shall have no obligation to apply such funds to such removal but may, nevertheless, do so where the City's interests would thereby be served.

7.11. DEDUCTIONS.

7.11.1. *City's Right To Withhold.* Notwithstanding any other provision of this Contract and without prejudice to any of the City's other rights or remedies, the City shall have the right at any time, to deduct and withhold from any progress or final payment that may be or become due under this Contract, such amount as may reasonably appear necessary to compensate the City for any actual or prospective loss due to:

- i. Work that is defective, damaged, flawed, unsuitable, nonconforming, or incomplete;
- ii. Claims or liens filed or reasonable evidence indicating probable filing of claims or liens from third-parties, regardless of merit;
- iii. Failure of the Contractor to make payments properly and promptly to subcontractors for material or labor;
- iv. Failure of the Contractor to complete any portion of the Work in compliance with an approved schedule;
- v. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract value;
- vi. Failure of the Contractor to submit on a timely basis, any documentation required by the Contract Documents, including without limitation, monthly reports, schedules, or request for approval of subcontractors;
- vii. Unauthorized Work or deviations by the Contractor from the Contract Documents;
- viii. Damage to the City or to another contractor;
- ix. State or local sales, use, or excise taxes from which the City is exempt;
- x. Any other failure of the Contractor to perform any of its obligations under this contract; or
- xi. The cost to the City, including attorneys' fees and administrative costs, of correcting any of the aforesaid matters or exercising any one or more of the City's remedies set forth within the Contract Documents.

- 7.11.2. *Release and Use of Withheld Funds.* The City shall be entitled to retain any and all amounts withheld pursuant to Section 7.11.1 above until the Contractor has either performed the obligations in question or furnished security for such performance satisfactory to the City. The City shall be entitled to apply any money withheld or any other money due to the Contractor under this Contract to reimburse itself for any and all costs, expenses, losses, damages, liabilities, suits, judgments, awards, attorneys' fees and administrative expenses incurred, suffered, or sustained by the City and chargeable to Contractor under this Contract.
- 7.11.3. *Waiver under C.R.S. § 38-26-107.* Execution of the Contract Documents by the Contractor shall constitute waiver by the Contractor to claim any right of payment of interest upon any such retained funds, or to claim any right of payment of interest upon funds withheld under the provisions of C.R.S. § 38-26-107.

SECTION 8 DISPUTES AND REMEDIES

8.1. DISPUTE RESOLUTION PROCEDURE.

- 8.1.1. *Notice of Disputes and Objections.* If the Contractor disputes or objects to any requirement, direction, instruction, interpretation, determination, or decision of the City, the Contractor may notify the City in writing of the issue and of the amount of any equitable adjustment to the Contract price or Contract time to which the Contractor claims it will be entitled as a result thereof; provided, however, that the Contractor shall, nevertheless, proceed without delay to perform the Work as required, directed, instructed, interpreted, determined, or decided by the City, without regard to such dispute or objection. Unless the Contractor so notifies the City within two (2) business days after receipt of such requirement, direction, instruction, interpretation, determination, or decision, the Contractor shall be conclusively deemed to have waived all such disputes or objections and all claims based thereon.
- 8.1.2. *Negotiation of Disputes and Objections.* To avoid and settle without litigation any such dispute or objection, the City and the Contractor agree to engage in good faith negotiations. Within 10 (ten) business days after the City's receipt of the Contractor's written notice of dispute or objection, a conference between the City and the Contractor shall be held to resolve the dispute. Within 10 (ten) business days after the end of the conference, the City shall render its final decision in writing to the Contractor. If the Contractor objects to the City's final decision, then it shall, within 10 (ten) business days give the City notice thereof and, in such notice, shall state its final demand for settlement of the dispute. Unless the Contractor so notifies the City, the Contractor shall be conclusively deemed to have agreed to and accepted the City's final decision and to have waived all claims based on such final decision.

8.2. DISPUTED CLAIMS FOR EXTRA WORK: In case the Contractor deems extra compensation is due for Work or material not covered in the Contract Documents, or not ordered by the Project Manager as Extra Work, the Contractor shall notify the Project Manager in writing of its intention to make claim for such extra compensation before beginning Work on which the Contractor bases the claim, and shall afford the Project Manager every facility for keeping actual cost of the Work. Failure on the part of the Contractor to give such notification or to afford the Project Manager proper facilities for keeping strict account of actual cost shall constitute a waiver of the claim for such extra compensation. The filing of such notice by the Contractor and the keeping of costs by the Project Manager shall not in any way be construed to prove the validity of the claim. When the Work has been completed, the Contractor shall, within 10 (ten) days, file its claim for extra compensation with the Project Manager, who will review for consideration.

8.3. CONTRACTOR'S REMEDIES. If the City fails or refuses to satisfy a final demand made by the Contractor pursuant to Section 8.2 above, or to otherwise resolve the dispute which is the subject of such demand to the satisfaction of the Contractor, within 10 (ten) days following receipt of such demand, the Contractor shall be entitled to pursue such remedies, not inconsistent with the provisions of this Contract, as it may have in law or equity.

8.4. CITY'S REMEDIES. If it should appear at any time prior to final payment that an Event of Default, and has failed to cure any such Event of Default, as defined within Section 4.10 of the General Conditions, the City shall have the right, at its election and without prejudice to any other remedies provided by law or equity, to pursue any one or more of the following remedies:

- i. The City may require the Contractor, within such reasonable time as may be fixed by the City, to complete or correct all or any part of the Work that is defective, damaged, flawed, unsuitable, nonconforming, or incomplete; to remove from the Work site any such work; to accelerate all or any part of the Work; and to take any or all other action necessary to bring the Contractor and the Work into strict compliance with this Contract.
- ii. The City may perform or have performed all work necessary for the accomplishment of the results stated in (i) above and withhold or recover from the Contractor all the cost and expense, including attorneys' fees and administrative costs, incurred by the City in connection therewith.
- iii. The City may accept the defective, damaged, flawed, unsuitable, nonconforming, incomplete, or dilatory Work or part thereof and make an equitable reduction in the Contract price.
- iv. The City may terminate this Contract without liability for further payment of amounts due or to become due under this Contract, pursuant to Section 4.10 of the General Conditions.
 - i. Upon any termination of this Contract or of the Contractor's rights under this Contract in accordance with Sections 4.10 or

4.11 of the General Conditions, and at the City's option exercised in writing, any or all subcontracts and supplier contracts of the Contractor shall be deemed to be assigned to the City without any further action being required, but the City shall not thereby assume any obligation for payments due under such subcontracts and supplier contracts for any Work provided or performed prior to such assignment.

- v. The City may withhold from any progress or final payment, whether or not previously approved, or may recover from the Contractor any and all costs including attorneys' fees and administrative expenses, incurred by the City as the result of any Event of Default or as a result of actions taken by the City in response to any Event of Default.
- vi. The City may recover any damages suffered by the City.

8.5. CITY'S SPECIAL REMEDY FOR DELAY. If the Work is not completed by the Contractor in full compliance with and as required by or pursuant to this Contract, within the time as such time may be extended by Change Order, then the City may invoke its remedies under Section 8.4 of the General Conditions or may, in the exercise of its sole and absolute discretion, permit the Contractor to complete the Work but charge to the Contractor and deduct from any progress or final payments, whether or not previously approved, administrative expenses and costs for each day completion of the Work is delayed beyond the completion date, computed as set forth in Section 4.8 of the General Conditions, as well as any additional damages caused by such delay.

8.6. ATTORNEY FEES: In the event there is any dispute between the the Contractor or the Surety and the City, its officers, agents or employees, and the City, its officers, agents or employees prevail, the City, its officers, agents or employees shall be granted all of its costs, including but not limited to attorney's fees, court costs and expert witness fees.

SECTION 9 OTHER PROVISIONS

- 9.1. Wherever a number of days is specified in this Contract it shall mean calendar days unless otherwise specified.
- 9.2. When a delay on any aspect of the Work occurs, the Contractor, to the maximum extent possible, shall utilize its resources elsewhere in the Work. If the Contractor, after complying the maximum extent possible by the reassignment of its labor force, equipment and materials, alleges to have suffered damages due to delay, and the delay is caused in whole or in part by acts or omissions within the control of the City or persons acting on its behalf, then such a claim shall be treated as a Change Order request and shall be processed in accordance with the Change Order, audit and inspection requirements specified in the General Provisions or it shall be deemed forever waived. Nothing herein contained shall be interpreted so

as to allow the Contractor to recover delay damages from the City for delays caused by acts of God, the acts or omissions of the Contractor, its subcontractors, employees or agents, or persons over which the City has no control.

- 9.3. Work performed by the Contractor under this Contract shall conform to reasonable and normal professional standards and the Contractor shall conduct itself at all times in a manner consistent with industry standards.
- 9.4. No reports, graphics or other material produced specifically for the City under this Contract shall be the subject of an application for copyright or trademark by or on behalf of the Contractor.
- 9.5. No assignment of any claim or proceeds under this Contract shall be binding upon the City unless it shall be first notified thereof in writing.

DEFINITIONS

Whenever the following terms or pronouns are used in the Specifications and Contract Documents, the intent and meaning shall be as follows:

AWWA: American Water Works Association.

CHANGE ORDER: A written modification of the Contract, issued after award to the Contractor, authorizing an addition, deletion, or revision to the Work within the general scope of the Contract or authorizing an adjustment in the Contract price or time mutually agreed upon between the City and the Contractor.

CDOT: Colorado Department of Transportation.

CONTRACT OR CONTRACT DOCUMENTS: The written agreement executed between the City and the Contractor covering the performance of the Work and the furnishing of labor and materials, by which the Contractor is bound to perform the Work and furnish the labor and materials and by which the City is obligated to compensate at a mutually established and accepted rate or price.

CONTRACTOR: The individual, partnership, firm, or corporation executing the Contract, acting directly or through lawful agents or employees, primarily liable for the acceptable performance of the Work for which contracted, and for the payment of all legal debts pertaining to the Work.

DRAWINGS: The Plans, profiles, typical cross-sections, general cross-sections, elevations, schedules, and details which show locations, character, dimensions, and details of the Work.

DISTRICT: A legally constituted group of individuals who have joined together in order to facilitate construction of utility systems within the limits of their property. The district shall be represented by its authorized Board of Directors.

PROJECT MANAGER: The duly authorized representative of the City, acting directly or through an assistant or representative.

EQUIPMENT: All machinery, together with the necessary supplies for upkeep and maintenance, and all tools and apparatus necessary for the proper construction and acceptable completion of the Work.

EXTRA WORK: Work not provided for in the Contract as awarded but found to be essential to the satisfactory completion of the Contract, within its intended scope.

FIELD ORDER: A written order effecting minor change in the Work not involving an adjustment in the Contract price or an extension of the Contract time, issued by the Project Manager to the Contractor during construction.

FINAL ACCEPTANCE: An acknowledgment made by the City that all Work has been completed.

FORCE ACCOUNT: A method of payment, other than lump sum or unit price, for Work ordered by a Change Order.

INSPECTOR: An authorized representative of the City assigned to make all necessary inspection of the Work performed or being performed, or of the materials furnished or being furnished by the Contractor.

LABORATORY: The official testing laboratories of the City or such other laboratories as may be designated by the Project Manager.

NOTICE TO PROCEED: A written notice to the Contractor of the date on which it is to begin Work.

PAYMENT BOND: The approved form of security furnished by the Contractor and its Surety as a guarantee that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the Work, as provided by law.

PERFORMANCE BOND: The approved form of security furnished by the Contractor and its Surety as a guarantee of good faith and ability of the Contractor to execute the Work in accordance with the terms of the Plans, Specifications, and Contract. In lieu of a separate Performance Bond, a combination Performance, Labor and Material Payment Bond may be supplied by the Contractor.

PERFORMANCE, LABOR AND MATERIAL PAYMENT BOND: Security furnished by the Contractor and its Surety as a guarantee that the Contractor will pay in full all bills and accounts for materials and labor used in the Work and that it will execute the Work in accordance with the Contract.

PLANS: The official Plans, working drawings, or supplemental drawings or exact reproductions thereof, approved by the Project Manager which show the locations, character, dimensions, and details of the Work to be done and which are to be considered as part of the Contract, supplementary to the Specifications.

PROGRESS SCHEDULE: A construction schedule prepared by the Contractor in a bar-chart, critical path or other format acceptable to the Project Manager which includes the start and completion dates of all salient features of the Work.

SHOP DRAWINGS: All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a subcontractor, manufacturer, supplier, or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.

SPECIAL PROVISIONS: The specific clauses setting forth conditions or requirements particular to the Work, covering work or materials involved in the bid and estimate, which are not thoroughly or satisfactorily stipulated in the General Provisions or Specifications.

SPECIFICATIONS: The directions, provisions, and requirements contained herein, supplemented by Special Provisions, pertaining to the method and manner of performing the Work, or to the quantities or the qualities of materials to be furnished under the Contract. Also includes Technical Specifications, part of the Contract Documents consisting of technical written descriptions for materials, equipment, construction systems, standards and workmanship.

STRUCTURES: Bridges, culverts, sewers, catch basins, retaining walls, manholes, headwalls, buildings, valve vaults and other features which may be encountered in the Work and not otherwise classified herein.

SUBCONTRACTOR: An individual, firm or corporation having a direct contract with the Contractor or the Contractor's subcontractor(s) for the performance of a part of the Work.

SUBSTANTIAL COMPLETION: The Work (or a specified part thereof) has progressed to the point where, in the opinion of the Project Manager, it is sufficiently complete in accordance with the Contract, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. For the purposes of final acceptance of the Work, Substantial Completion shall include cleanup of the Work site and all work areas.

SUPPLIER: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design.

SURETY: The corporate body or individuals who are bound by the Performance Bond; Payment Bond; or Performance, Labor and Material Payment Bond, with and for the Contractor who is responsible for the entire and satisfactory fulfillment of the Contract and for the payment of all debts incurred in fulfilling the Contract.

UNIT PRICE WORK: Work to be paid for on the basis of unit prices.

Exhibit D

Bond Number: 7901115635

PERFORMANCE, LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that
Silva Construction, Inc. (Contractor), as Principal (the "Principal")
and Nationwide Mutual Insurance Company, a corporation organized
under the laws of the State of Ohio, and authorized to transact
business in the State of Colorado, as "Surety," jointly and severally, including their heirs,
personal representatives, successors and assigns, are held and firmly bound unto the
City of Littleton as Obligee, hereinafter called Owner, for the use and benefit of claimants
as herein below defined, in the amount of
two million two hundred seventeen thousand one hundred eighty-seven Dollars
(\$ 2,217,187.00), for the payment and interest as provided by law for the
performance of the Contract between the Principal and the Owner, dated
2025, for the
Euclid Avenue Improvements Phase 1 #23-03 project in accordance with drawings
and specifications; which the Contract is made a part hereof, and is hereinafter referred
to as the Contract, and incorporated by this reference.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the
Principal, at all times, shall promptly and faithfully perform said Contract, and shall
promptly make payment to all claimants as hereinafter defined, for all labor and material
used or reasonably required for use in the performance of the Contract, any authorized
modifications thereof during the original term of the Contract, any extensions thereof that
may be granted by the Owner, and during the term of any guarantee or warranty required
under the Contract, and shall fully indemnify and save harmless the Owner from all costs
and damages which it may suffer by reason of failure to do so, and shall reimburse and
repay the Owner all outlay and expense when the Owner may incur in making good any
default, then the Principal and Surety shall have no obligation under this Bond, otherwise
it shall remain in full force and effect for a period of one (1) year following execution of the
Contract. Upon expiration, this Bond shall be extended by a continuation certificate for an
additional one (1) year, and extended thereafter until the warranty period has expired in
accordance with the terms of the Contract.

The Surety, for value received, agrees that no extension of time, change in,
addition to, or other alteration or modification of the terms of the Contract or work to be
performed there under or any other forbearance on the part of either the Owner or the
Principal to the other shall in any way release or impact the Surety's liability or obligation
on this Bond, and the Surety hereby waives notice of any extension of time, change in,
addition to, or other alteration or forbearance.

Whenever the Owner terminates the Contract in accordance with the terms
thereof, the Surety shall, within fifteen (15) calendar days after written notice of such
termination, notify the Owner in writing of its election to complete the Contract in
accordance with its terms and conditions, or notify the Owner that the Surety elects not
to complete the Contract. If the Surety fails to provide the written notice within the fifteen

(15) calendar day period, then it will have deemed to have not elected to complete the Contract. Should the Surety elect to complete the Contract, then it shall, within fifteen (15) additional calendar days, following written notice of such election, obtain a bid or bids for submission to Owner for completing the Contract in accordance with its terms and conditions. The Surety shall arrange for a contract between bidder and Owner, and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract price; but not exceeding, including other costs, attorneys fees of the Owner and damages for which the Surety shall be liable hereunder, the amount set forth in the first paragraph hereof. In the event of termination, the Surety may not engage the Principal to complete the Contract, without prior written consent of the Owner, which consent may be withheld in the Owner's sole discretion. If the Surety elects to complete the Contract, then it shall be entitled to receive the balance of the Contract price, less i) any amounts paid by the Owner to the Principal; ii) costs incurred by the Owner in correcting the defective work; iii) any additional legal, design professional or other costs incurred by the Owner resulting from Principal's default; and iv) any liquidated damages caused by the delayed performance or nonperformance of the Principal. Any progress payments, less retainage, due but not paid at the date of termination shall be paid to the Surety so long as the Surety has agreed to indemnify the Owner for the amount thereof and no other claims have been made to such funds by subcontractors or suppliers in accordance with the Contract or any applicable law. In the event that the Surety elects not to complete the Contract, the Owner may then have work completed by such means and in such manner, as it may deem advisable. The Surety, in such event, shall at all times make available, as work progresses under the Contract between the Owner and new contractor, sufficient funds to pay the cost of completion of the Contract pursuant to the its terms together with the other amounts set forth above, but in no event shall the Surety be responsible for the payment of any sums to the Owner until the Owner has paid in full its total obligation under the terms of the original Contract, plus Change Orders or amendments less deductions and claims chargeable by law or by the Contract, if any, and less the retainage which will be disbursed as provided by the Contract and any applicable law.

Any proceeding, whether legal or equitable, under this Bond, except for claims for payment of labor and material, or copyright or patent infringement, must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

Further, the above named Principal and Surety hereby jointly and severally agree with the Owner that the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such Contract ("claimant"), and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs or machinery, equipment and tools, consumed or used in connection with the construction of such work, whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

The above-named Principal and Surety hereby jointly and severally agree with the Owner that every claimant, who has not been paid in full at any time up to and including the time of final settlement for the work contracted to be done, file with the Owner, a verified statement of the amount due and unpaid in accordance with Section 38-26-107, C.R.S. Provided, further, that no final settlement between the Owner and the Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied. The Owner shall not be liable for the payment of any costs, attorney fees, or other expenses of any such legal remedies a claimant may have against the Principal or Surety.

SIGNED this 28th day of April 2025.

In the presence of:

Silva Construction, Inc.

By: 

(Contractor / Principal)

Nationwide Mutual Insurance Company

By: 

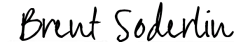
(Surety) Ashlea McCaughey, Attorney-in-Fact



(Accompany this Bond with Attorney in-fact's authority from the Surety to execute the Bond, certified to include the date of the Bond.)

APPROVED FOR THE OWNER:

DocuSigned by:



BRENT SODERLIN

DIRECTOR OF PUBLIC WORKS AND UTILITIES

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:

ALISSA CAHALAN; ASHLEA MCCAUGHEY; BEN WILLIAMS; DONALD E APPLEBY;
MARK SWEIGART; MARY ASHLEY ALLEN; SARAH C BROWN; TODD BENGFORD;

each in their individual capacity, its true and lawful attorney-in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds and undertakings, and other obligatory instruments of similar nature, in penalties not exceeding the sum of

UNLIMITED

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the board of directors of the Company:

"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company.

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company.

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 1st day of April, 2024.



Antonio C. Albanese, Vice President of Nationwide Mutual Insurance Company

ACKNOWLEDGMENT

STATE OF NEW YORK COUNTY OF KINGS: ss

On this 1st day of April, 2024, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company.



Sharon Laburda
Notary Public, State of New York
No. 01LA6427697
Qualified in Kings County
Commission Expires January 3, 2026



Notary Public
My Commission Expires
January 3, 2026

CERTIFICATE

I, Lezlie F. Chimienti, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this ____ day of
_____, 2025.



Assistant Secretary



THINKING AHEAD

April 28, 2025

City of Littleton
2255 West Berry Avenue
Littleton, CO 80120

Re: Principal: Silva Construction, Inc.
Obligee: City of Littleton
Project Description: Euclid Avenue Improvements Phase 1 #23-03,
Littleton, CO
Bond Number: 7901115635
Bond Amount: \$2,217,187.00

To Whom It May Concern:

The referenced bonds and accompanying Power of Attorney forms are "undated" because the contract has not yet been dated.

This letter serves as your authority to insert the appropriate dates once the contracts have been executed. Please note the date of the bond and power of attorney must be on or after the date of the contract in order for the bond to become effective. The bond is not valid if it, or the accompanying power of attorney, is dated prior to the contract date.

Once the bonds have been dated, please notify our office within 24 hours of the applicable date so that our records and those of the Surety can be completed.

Sincerely,

Ashlea McCaughey, AFSB
720-458-5775
amccaughey@holmesmurphy.com

NOTICE TO PROCEED
[Project Name and Number]

Date: _____

TO: **[Type Contractor Name]**
[Type Contractor Address]

You are hereby authorized to proceed on this date, **[Date]** with the work covered in the contract documents titled **[Project Name and Number]**. Work must commence within **[Number of Days in which construction must commence]** days of acceptance of this Notice to Proceed.

OWNER, CITY OF LITTLETON

By: _____ Title: _____

CONTRACTOR ACCEPTANCE OF NOTICE TO PROCEED

By: _____
this _____ day of _____, 20____.
Title: _____

CONTRACTOR'S RECEIPT FOR FINAL PAYMENT

[Project Name and Number]

Date: _____

TO: [Type Contractor Name]
[Type Contractor Address]

The undersigned has accepted the City of Littleton's Check No. _____ dated _____, 20 _____ in the amount of _____ Dollars (\$ _____), as final payment of all sums due for work done under the Contract Documents titled **[Project Name and Number]**, as amended, and as complete performance by the Contractor of all obligations to be performed by it pursuant thereto. The Contractor acknowledges and agree that no future claims for additional payments shall be made.

CONTRACTOR

By: _____ Title: _____

FINAL ACCEPTANCE AND WARRANTY INITIATION

[Project Name and Number]

Date: _____

TO: [Type Contractor Name]
[Type Contractor Address]

You are hereby notified that on the ____ day _____, 20____, the City of Littleton has accepted the construction work completed by _____, for the construction work covered under the contracts documents titled **[Project Name and Number]**.

You are also notified that the warranty terms and conditions as set forth in the contract documents are initiated as of the date of this acceptance.

Final payment receipt form is attached within the contract documents for your convenience. Should this form not be returned within ten (10) calendar days, properly signed and approved, it will be assumed that lack of such performance constitutes informal giving of a receipt and satisfaction by the contractor for final settlement of all amounts due.

CITY OF LITTLETON

By:_____ Title:_____

NOTICE OF END OF BASIC WARRANTY PERIOD

[Project Name and Number]

Date: _____

TO: _____

You are hereby notified that on the ____ day of _____, 20____, the City of Littleton has ended the basic warranty period for the construction work completed by _____ for the construction work covered under the contract documents titled **[Project Name and Number]**. The basic warranty two (2) years from the date of Final Acceptance and warranty initiation.

You are also notified that the contract provisions concerning additional warranties on remedied work; patented devices, materials, and processes which may have been used in this construction; or other expressed warranties are not relinquished by the owner as a result of the issuance of this notice.

CITY OF LITTLETON

By: _____
Title: _____

Exhibit E & Exhibit F

PROJECT SPECIAL PROVISIONS MODIFICATIONS TO COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

The technical specifications for this project shall be the Colorado Department of Transportation 2023 Standard Specifications for Road and Bridge Construction and the most current version of the Metropolitan Government Pavement Engineers Council (MGPEC) standards. The following special provisions supplement or modify the Standard Specifications and Supplemental Specifications and take precedence over the Standard Specifications, Supplemental Specifications, and plans.

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NOTICE TO BIDDERS

Pursuant to subsections 102.04 and 102.05, it is recommended that bidders on this project review the work site and plan details prior to submitting a proposal. Prospective bidders may contact the following listed authorized City representative prior to the Bid Question Submittal Deadline listed in the Bid Documents and questions and responses will be posted online from the Rocky Mountain E-Purchasing System at www.govbids.com, if such is prepared.

City Procurement Manager: Megan Sullivan - MSullivan@littletongov.org

The above-referenced individual or their designee are the only representatives of the City with authority to provide any information, clarification, or interpretation regarding the plans, specifications, and any other contract documents or requirements.

COMMENCEMENT AND COMPLETION OF WORK

The Contractor shall commence work under the Contract within seven (7) calendar days after date of the "Notice to Proceed" work shall be completed within **75 Calendar Days**. Minimum Salient features to be shown (for each bid schedule) on the Contractor's Progress Schedule are:

- 1) ROW Use Permit (CDOT & Littleton)
- 2) Traffic control setup per the approved MHT's for each phase of work.
- 3) Public Notification
- 4) Erosion Control
- 5) Removals
- 6) Earthwork/Subgrade
- 7) Curb & Gutter, Sidewalks, and Curb Ramps
- 8) Asphalt Paving, Concrete Paving
- 9) Storm Sewer Pipe and Inlets
- 10) Striping
- 11) Clean Up
- 12) Landscape/Irrigation Repair (as necessary).
- 13) Final Acceptance

All work shall be completed prior to **August 11, 2025 unless previously approved by the City of Littleton.** Completion shall include all pavement marking installation.

REVISION OF SECTION 101 GENERAL PROVISIONS

SECTION 101 of the Standard Specifications is hereby revised for this project as follows:

101 DEFINITIONS & TERMS

Technical Specifications related to construction materials and methods for the work embraced under this Contract shall consist of the Colorado Department of Transportation *Standard Specifications for Road and Bridge Construction* dated 2023.

Certain terms utilized in the Specifications referred to in the paragraph above shall be interpreted to have different meaning within the scope of this Contract. A summary of redefinitions follows:

- | | |
|-------------------|--|
| Subsection 101.28 | “Department” shall mean the City of Littleton, Colorado. |
| Subsection 101.29 | “Chief Engineer” shall mean the City Engineer, Littleton, Colorado, or designated representative. |
| Subsection 101.39 | “Laboratory” shall mean Littleton, Colorado or their designated representative. |
| Subsection 101.51 | “Project Engineer” or “Project Manager” shall mean the City Engineer, Littleton, Colorado, or their designated representative. |
| Subsection 101.76 | “State” shall mean Littleton, Colorado (where applicable). |

REVISION OF SECTION 105 CONTROL OF WORK

SECTION 105 of the Standard Specifications is hereby revised for this project as follows:

105.17 REMOVAL OF UNACCEPTABLE WORK AND UNAUTHORIZED WORK

Shall include the following:

Contractor will verify all items to be removed and replaced with the Engineer. The Contractor shall verify, with the Engineer, any marked locations not included within the contract documents prior to any removal activities. Any removal NOT listed in the contract or otherwise verified and approved by the Engineer will be at the Contractor's expense.

Existing condition or damage to any adjacent infrastructure and/or structures shall be the responsibility of the Contractor to fully document prior to any work. The Contractor shall notify the Engineer of any existing damage and to confirm the various locations, and their limits, of existing damage prior to any work.

105.19 MAINTENANCE DURING CONSTRUCTION

Shall include the following:

The Contractor shall pave the roadway surface within seven (7) calendar days of milling operations. If traffic is to be placed on a milled surface the Contractor shall adequately protect all utility appurtenances or vertical milled faces by placing a wedge of asphalt or other means deemed acceptable to the Engineer. All costs associated with temporary asphalt, pavement markings or additional signage shall not be measured and paid for separately but shall be included in the work.

**REVISION OF SECTION 106
CONFORMITY TO THE CONTRACT OF HOT MIX ASPHALT**

Section 106 of the Standard Special Provisions is hereby revised for this project as follows:

Subsection 106.05 shall include the following:

For this project, Contractor process control testing of hot mix asphalt is mandatory.

REVISION OF SECTION 107 LEGAL RELATIONS & RESPONSIBILITY TO THE PUBLIC

SECTION 107 of the Standard Specifications is hereby revised for this project as follows:

107.02 PERMITS, LICENSES, AND TAXES

Shall include the following:

Unless otherwise specified, the Contractor shall procure all required permits and licenses; pay all charges, fees, and taxes, including permits procured for this project by others; and give all notices necessary and incidental to the due and lawful prosecution of the work. The costs of these permits will not be paid for separately but shall be included in the work.

Prior to beginning work, the Contractor shall furnish the Engineer with a written list of all permits required for the proper completion of the contract. The list shall clearly identify the types of permits that must be obtained before work on any particular phase or phases of work can be started. Copies of the fully executed permits shall be furnished to the Engineer upon request.

107.07 PUBLIC CONVENIENCE AND SAFETY

Shall include the following:

The Contractor shall provide the following services on an ongoing basis throughout the duration of the project:

- (a) A contact person for the project shall be designated by the Contractor at the preconstruction conference. This individual shall be primarily responsible for maintaining communications with the Engineer and impacted residents/businesses; provide information on a regular basis to private individuals, local organizations interested in the project and the affected agencies.
- (b) The following agencies shall be coordinated with on an ongoing basis:

City of Littleton

South Metro Fire and Rescue

City of Littleton Police Department

Adjacent Businesses/Residents

RTD

Littleton Public Schools

- (c) A letter of introduction and notice of work shall be delivered to all affected landowners and

tenants at least five (5) business days and no more than ten (10) business days prior to mobilization and the commencement of work for each project site.

(d) Updates shall be on a weekly basis after mobilization and one (1) week prior to any major traffic switches.

(e) The letter shall include the following as a minimum:

Contractor – Name, Address, Direct Phone Number

Field Superintendent – Name, Mobile Phone Number

Schedule (commencement date and duration) and description of work. Description of work shall include approximate length of time for spraying tack and paving operations restricting use of roadway.

Information regarding private property and repair procedures

(f) The contractor shall notify each adjacent property owner in writing a minimum of forty-eight (48) hours prior to the commencement of construction activities at the corresponding address or location.

(g) Payment for the above requirements will not be made separately but shall be included in the work.

107.10 BARRICADES AND SIGNS

Shall include the following:

Construction traffic control signs or devices not in use shall be removed from the roadway and pedestrian walkway (sidewalk & trails). Laying the sign down in a horizontal position or turning the sign parallel is not permitted on the sidewalk and/or within private property such as residential yards.

Variable Message Boards (VMB) shall contain the following information at a minimum: type of work, the scheduled week of work, and the phrase “ALTERNATE ROUTES ARE ADVISED”.

Any missing or defaced signs shall be replaced within twenty-four (24) hours.

"NO PARKING" signs shall be placed a minimum of forty-eight (48) hours in advance of any construction activities on all streets to be resurfaced where on-street parking is permitted. No Parking signs shall specify the date range and time where no parking will be allowed due to construction activities.

“Bump” and “Milled Surface” signs, or approved equivalents, shall be posted in sufficient number and proper locations to adequately notify the public of such roadway conditions.

Any other signs as required by the Traffic Engineer shall be placed.

When surface treatment work is performed by contract, Contractor shall supply and maintain all signs at Contractor's expense.

For locations that do not have sufficient right-of-way available to store the sign(s) or device(s), they must be picked up or moved to an approved storage area. Signs that are placed in the medians must be dismantled, laid down, or relocated to the approved storage area.

107.12 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE *shall be revised to include the following:*

- (a) The contractor shall replace and/or repair all damaged landscaping within seven (7) days of completion of the adjacent removal and replacement.
- (b) Sod damage resulting from concrete removal and replacement shall be cleanly cut to the limits of the damaged area(s) and parallel to the sidewalk or curb and gutter and replaced at a minimum removal and replacement width of 18" wide for the full length of the damaged area(s).
- (c) Landscape rock, mulch and other miscellaneous landscaping and all other related materials shall be cleared and replaced in a condition equal to or better than before construction.
- (d) The contractor shall repair and/or replace any damaged irrigation pipes. The repairs or replacement must be completed within twenty-four (24) hours of the damage.
- (e) Continuous failure to complete repair in the time specified above may result in the suspension of additional work until the specified repairs have been made and are determined to be satisfactory by the Engineer. Additional contract time will not be given for such suspensions.

Unless otherwise specified in the Contract, all work listed above will not be measured and paid for separately but shall be included in the work.

REVISION OF SECTION 108 PROSECUTION AND PROGRESS

SECTION 108 of the Standard Specifications is here by revised for this project as follows:

108.03 SCHEDULE

Shall include the following:

The contractor shall provide a construction schedule at the pre-construction meeting for review by the Engineer.

108.05 LIMITATION OF OPERATIONS

Shall include the following:

In residential areas, the Contractor shall limit hours of operation to **7:00 a.m. to 7:00 p.m. Monday thru Friday, 9:00 AM to 5:00 PM Saturday, and no work on Sunday** or as otherwise approved in writing by the Engineer.

In non-residential areas, the Contractor shall limit hours of operation to **7:00 a.m. to 7:00 p.m. Monday thru Sunday** or as approved in writing by the Engineer.

108.09 FAILURE TO COMPLETE WORK ON TIME

Shall include the following:

A daily charge will be made against the Contractor for each calendar day that work is performed outside the working times listed in 108.09, Limitation of Operations. A penalty of \$500 per occurrence will be applied as Liquidated Damages.

REVISION OF SECTION 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

SECTION 202 of the Standard Specifications is hereby revised for this project as follows:

202.02 CONSTRUCTION REQUIREMENTS *shall be revised to include the following:*

Removal of Fire Hydrant shall include removing the lateral pipe and valve. The pipe stub at the main line tee shall be capped.

202.12 BASIS OF PAYMENT *shall be revised to include the following:*

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Removal of Catch Drain	Each
Removal of Inlet	Each
Removal of Manhole	Each
Removal of Pipe	LF
Removal of Sidewalk	SY
Removal of Curb and Gutter	LF
Removal of Curb, Gutter, and Sidewalk	LF
Removal of Concrete Curb Ramp	SY
Removal of Concrete Pavement	SY
Removal of Asphalt Mat	SY
Removal of Asphalt Mat (Special)	SY
Removal of Ground Sign	Each

When the Contract does not include pay items for removal of a particular type of structure or obstruction, the removal will not be paid for separately but shall be included in the work.

Payment for Removal of Pipe, Removal of Catch Drain, and Removal of Manhole shall include necessary excavation, removal of the structures, lateral pipes (if any) and valve removal (if any), and capping (as necessary).

REVISION OF SECTION 203 EXCAVATION AND EMBANKMENT

SECTION 203 of the Standard Specifications is hereby revised for this project as follows:

203.02 EXCAVATION

Subsection 203.02 (c) is hereby deleted and replaced with the following:

- (c) Material that is free of organics but has excessive moisture shall not be classified as unsuitable for subgrade due to the presence of excessive water. It shall be the Contractor's responsibility to satisfy the moisture conditions specified in the Contract Documents for subgrade. The classification of material as unsuitable for subgrade shall be made by the Engineer.

203.13 METHOD OF MEASUREMENT *shall be revised to include the following:*

Proof rolling will not be measured and paid for separately, but shall be included in the work as required.

203.12 BASIS OF PAYMENT *shall be revised to include the following:*

Any additional excavation and backfill made by the Contractor below the approved subgrade elevation, without the prior acceptance of the Engineer will be at the responsibility and expense of the Contractor.

**REVISION OF SECTION 208
EROSION CONTROL**

Section 208 of the Standard Specifications is hereby revised for this project as follows:

208.12 BASIS OF PAYMENT *shall be revised to include the following:*

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Erosion Log Type 2 (12 Inch)	LF
Reinforced Rock Berm	LF
Aggregate Bag	LF
Concrete Washout Area	Each
Storm Drain Inlet Protection (Type II)	Each
Vehicle Tracking Control	Each
Erosion Control Management	LS

Topsoil, native seeding, sod and mulching will be paid for under their respective sections.

REVISION OF SECTION 210 RESET STRUCTURES

Section 210 of the Standard Specifications is hereby revised for this project as follows:

Subsection 210.02 shall include the following:

Any work performed by the Contractor on a utility facility is subject to inspection and approval by the owning utility company. The Contractor is responsible for coordinating inspection with the owning utility.

The Contractor must submit notice to the Project Manager of water service outages in accordance with Denver Water standards. The Contractor shall give a minimum of 30-day notice to the owning utility company before any work that will affect their facilities. The Contractor shall not operate any water valves without permission of the owning utility company.

All structures within pavement areas shall be recessed a minimum of a quarter inch to maximum of half inch below finish grade. Structures within sidewalk area shall have a pedestrian lid and flush with finish grade.

Structures within the roadway surface shall be adjusted prior to placement of the final lift of asphalt. Manhole ring and cover assemblies shall be adjusted to finish grade on reconstructs (includes up to 18" from top of cone section to finish grade). Manholes located within overlays will require grade adjustment rings that can be mechanically secured to the existing manhole ring. All materials shall be approved by the owning utility.

Temporary construction plates must be inspected prior to use on the project by the project inspector. All plates shall be sized for the manhole intended to be covered, shall have centering devices, and shall be traffic load rated.

Subsection 210.10 shall include the following:

Valve Box Assembly. "Replacement and/or adjustment of valve boxes" shall involve removal of the existing valve box riser assembly, or a portion thereof, and installation of a new valve box assembly, and raising or lowering the new assembly to match construction activity grade (elevation). Unless otherwise specified, all required materials shall be supplied by the Contractor. All materials used for this item shall be approved by the owning utility for use.

Valve Boxes located within overlays will require grade adjustment risers that can be mechanically secured to the existing valve top. "Drop in" adjusting rings will not be allowed. All materials shall be approved by the owning utility.

All utility valve boxes shall be identified, functional and accessible at all times.

When adjusting valve boxes, the box shall be cleaned of all foreign debris such that the operating nut of the valve is fully accessible to operate. The Work shall be subject to inspection by and approval of the owning utility and is incidental to the pay item for adjusting water valves.

Monument (Type 3A). Contractor shall comply with the requirements in Section 625.08.

210.13 BASIS OF PAYMENT *shall be revised to include the following:*

Payment will be made under:

Pay Item	Pay Unit
Reset Ground Sign	Each
Reset Pull Box	Each
Adjust Manhole	Each
Adjust Valve Box	Each
Adjust Monument (Type 3A)	Each

REVISION OF SECTION 212 LANDSCAPE RESTORATION

SECTION 212 of the Standard Specifications is here by revised for this project as follows:

DESCRIPTION

212.01 This work consists of restoring existing sod, landscaping, and sprinkler systems due to construction activities for curbs and sidewalks. The Contractor is also directed to the requirements of Revision of Section 107.12. Topsoil requirements shall comply with Section 207. Restoration of seeded and sodded areas shall comply with Section 212. Restoration of other landscaping materials, such as mulch and plantings, shall comply with Section 214.

CONSTRUCTION REQUIREMENTS

212.03 It is anticipated construction of curbs and sidewalks will affect existing miscellaneous landscape materials such as topsoil, sod, plantings, river rock, wood mulch, and other miscellaneous landscaping features. When the Contractor's construction operations for curbs and sidewalks affects existing landscaping, the Contractor shall document the landscaping prior to construction with photographs submitted to the Engineer.

The Contractor shall remove the landscape material to the limits required for construction and stockpile the material. Care shall be taken to not damage landscape materials during removal. Following completion of curbs and sidewalks the landscape material shall be restored to the areas.

Property owners shall be notified prior to removal of landscape materials, including information on schedule and restoration of the landscaping.

Any landscaping materials damaged by the Contractor's operations shall be replaced as directed by the Engineer at the Contractor's expense.

Grading and sidewalk construction may affect existing sprinkler heads and sprinkler lateral lines. If construction operations affect sprinkler systems, the sprinkler line shall be modified by capping or resetting as directed by the Engineer and coordinated with the adjacent property owner. Any sprinkler lines damaged shall be repaired as directed by the Engineer.

METHOD OF MEASUREMENT

212.07 Landscape Restoration will not be measured but shall be paid for as lump sum.

BASIS OF PAYMENT

212.08 Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Landscape Restoration	Lump Sum

Payment shall include removal, hauling, stockpiling, resetting, restoration and replacement of any damaged landscape materials. Payment shall include sprinkler system capping, resetting and repairs. Topsoil and Sod will not be paid for separately but shall be included in this work item.

REVISION OF SECTION 250 ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT

SECTION 250 of the Standard Specifications is hereby revised for this project as follows:

250.03 GENERAL

Shall include the following:

Job materials and equipment may be stockpiled and stored at locations near the job site. A list of sites to be used for this purpose and written permission from the property owner shall be submitted to the Engineer for approval at least ten (10) days prior to any use. The proposed truck route for ingress and egress to such sites shall also be submitted to the Engineer for approval. Using such job-site storage requires the following:

1. Obtaining written permission from the property owner, which shall include a brief description of the area of the property to be used, the length of time the property will be used for this purpose, any access restrictions (i.e. times of day), and the name and phone number of the property owner. A copy of the written permission shall be submitted to the Project Manager at least one week prior to delivery of material to the site.
2. Keeping stockpiles and equipment confined to the approved area.
3. Providing security for job materials and equipment and for public safety at the site.
4. Keeping all access roads clean and in good condition.
5. Returning site to original condition.

Precautions shall be taken to ensure that stockpiles are carefully mixed just prior to use to ensure uniform distribution of the moisture, and that they do not become contaminated with over-sized seed rock, clay, silt or excessive amounts of moisture. The stockpile shall be kept in areas that drain readily. Segregation of the aggregate will not be permitted.

When surface treatment work is performed by contract, the Contractor shall be responsible for compliance with all requirements of this section. The Contractor shall hold the City and all its employees and representatives harmless from any injury or damage to property occurring as a result of Contractor's operations on property used for this purpose.

REVISION OF SECTION 304 AGGREGATE BASE COURSE

SECTION 304 of the Standard Specifications is hereby revised for this project as follows:

304.02 AGGREGATE *shall be revised to include the following:*

The minimum allowable R-value for Aggregate Base Course shall be 78. The specific gravity for the aggregates shall be greater than 2.0 at the source. The use of crushed reclaimed concrete material under some circumstances may be substituted for natural aggregate for use in roadbed stabilization upon review and written approval of the Engineer. Aggregate base course for use in shouldering and all-weather surfaces shall be natural and approved by the City of Littleton. All-weather surfaces will be required in-place at the end of each shift when traffic is not running on pavement. Base course from within the existing roadway section, if encountered, can be used as an all-weather surface.

Base course shall have a minimum unit weight of 125 pounds per cubic foot.

The Contractor shall have adequate Aggregate Base Course available for use on project as required by the Engineer.

304.08 BASIS OF PAYMENT *is deleted in its entirety and replaced with the following:*

Payment for aggregate base course shall be made at the applicable contract unit price for Aggregate Base Course and shall include full compensation for all transportation, materials, labor, equipment, supervision, tools, placement, compaction and all other appurtenant items to complete the work.

Excavation and removal of subgrade deemed unsuitable by the Engineer shall not be measured and paid of separately, but shall be included in the work.

Water will not be measured and paid for separately, but shall be included in the work.

If the Contractor utilizes imported crushed reclaimed concrete in lieu of aggregate base course, payment will be made on the accepted quantity of Aggregate Base Course, Class 6.

If the Contractor elects to utilize Aggregate Base Course to correct subgrade imperfections or control depths at their convenience this will not be paid for separately but shall be included in the work.

Pay Item

Aggregate Base Course (Class 6)

Pay Unit

CY

REVISION OF SECTION 304 AND 403 AGGREGATE BASE COURSE AND HOT MIX ASPHALT TICKET COLLECTION

Sections 304 and 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 304.08 and 403.05 shall include the following:

The Contractor shall collect the scale ticket on each load when it is delivered to the project site, and ensure that the information required in subsection 109.01 is shown on each ticket. The Contractor's ticket collector shall add the placement location to each scale ticket using stationing or mileposts and sign it.

The scale tickets shall be available on site for CDOT personnel to inspect.

Each day the Contractor shall provide to the Engineer envelopes which contain the previous day's signed tickets and the following:

1. On each envelope: Project number, date of paving, type of material, daily total and cumulative total.
2. One of the following:
 - A. Two adding machine tape tabulations of the weight tickets with corresponding totals run and signed by different persons,
 - B. One signed adding machine tape tabulation of the weight tickets that has been checked and signed by a second person,
 - C. Signed check tape of computer scale tickets that have a cumulative total. These scale tickets must be consecutive and without voids adjustments.
3. A listing of any overweight loads on the envelope, including ticket numbers and amount over legal limit.
4. A comparison of the actual yield for each day's placement to the theoretical yield. Theoretical yield shall be based on the actual area paved, the planned thickness, and the actual density of the mixture being placed. Any variance greater than +2.5% shall be indicated on the envelope and a written explanation included.

All of the above items such as collected scale tickets, total tabulation sheets, over weight tickets, overweight permits, haul vehicle ID sheets, and etc. shall also be submitted electronically (scanned pdf format).

The Contractor shall provide a vehicle identification sheet that contains the following information for each vehicle:

- (1) Vehicle number
- (2) Length
- (3) Tare weight
- (4) Number of axles

- (5) Distance between extreme axles
- (6) All other information required to determine legal weight.
- (7) Legal weight limit.

**REVISION OF SECTION 403
HOT MIX ASPHALT**

Section 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 403.02 shall include the following:

The design mix for hot mix asphalt shall conform to the following:

Table 403-1						
Property	Test Method	Value For Grading				
				S(75)	SX(75)	Patching
Air Voids, percent at: N (design)	CPL 5115			3.5 – 4.5	3.5 – 4.5	3.5 – 4.5
Lab Compaction (Revolutions): N (design)	CPL 5115			75	75	75
Stability, minimum	CPL 5106			28	30	28
Aggregate Retained on the 4.75 mm (No. 4) Sieve for S, SX and SG, and on the 2.36mm (No. 8) Sieve for ST and SF with at least 2 Mechanically Induced fractured faces, % minimum*	CP 45			60%	60%	60%
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B			80	80	80
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B			205 (30)	205 (30)	205 (30)
Grade of Asphalt Cement, Top Layer				PG64-22	PG64-22	PG64-22
Grade of Asphalt Cement, Layers below Top				PG64-22	PG64-22	PG64-22
Voids in the Mineral Aggregate (VMA) % minimum	CP 48			See Table 403-2	See Table 403-2	See Table 403-2
Voids Filled with Asphalt (VFA), %	AI MS-2			65-80	65-75	65-75
Dust to Asphalt Ratio Fine Gradation Coarse Gradation	CP 50			0.6 – 1.2 0.8 – 1.6	0.6 – 1.2 0.8 – 1.6	0.6 - 1.2 0.8 – 1.6

Table 403-1						
Property	Test Method	Value For Grading				
				S(75)	SX(75)	Patching
Note:	AI MS-2 = Asphalt Institute Manual Series 2					
Note:	Mixes with gradations having less than 40% passing the 4.75 mm (No. 4) sieve shall be approached with caution because of constructability problems.					
Note:	Gradations for mixes with a nominal maximum aggregate size of one-inch or larger are considered a coarse gradation if they pass below the maximum density line at the #4 screen.					
	Gradations for mixes with a nominal maximum aggregate size of 3/4" to 3/8" are considered a coarse gradation if they pass below the maximum density line at the #8 screen.					
	Gradations for mixes with a nominal maximum aggregate size of #4 or smaller are considered a coarse gradation if they pass below the maximum density line at the #16 screen.					
	*Fractured face requirements for SF may be waived by RME depending on project conditions.					

All mix designs shall be run with a gyratory compaction angle of 1.25 degrees and properties must satisfy Table 403-1. Form 43 will establish construction targets for Asphalt Cement and all mix properties at Air Voids up to 1.0 percent below the mix design optimum. CDOT will establish the production asphalt cement and volumetric targets based on the Contractor's mix design and the relationships shown between the hot mix asphalt mixture volumetric properties and asphalt cement contents on the Form 429. CDOT may select a different AC content other than the one shown at optimum on the Contractor's mix design in order to establish the production targets as contained on the Form 43. Historically, Air Voids adjustments typically result in asphalt cement increases from 0.1 to 0.5 percent. Asphalt binder content shall conform to the following: minimum of 5.4% and a maximum of 6.1%. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

Table 403-2				
Nominal Maximum Size*, mm (inches)	Minimum Voids in the Mineral Aggregate (VMA)			
	***Design Air Voids **			
	3.5%	4.0%	4.5%	5.0%
37.5 (1½)	11.6	11.7	11.8	N/A
25.0 (1)	12.6	12.7	12.8	
19.0 (¾)	13.6	13.7	13.8	
12.5 (½)	14.6	14.7	14.8	
9.5 (⅜)	15.6	15.7	15.8	
4.75 (No. 4)	16.6	16.7	16.8	16.9
	* The Nominal Maximum Size is defined as one sieve larger than the first sieve to retain more than 10%. ** Interpolate specified VMA values for design air voids between those listed. *** Extrapolate specified VMA values for production air			

	voids beyond those listed.
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The Contractor shall prepare a quality control plan outlining the steps taken to minimize segregation of HMA. This plan shall be submitted to the Engineer and approved prior to beginning the paving operations. When the Engineer determines that segregation is unacceptable, the paving shall stop and the cause of segregation shall be corrected before paving operations will be allowed to resume.

Hot mix asphalt for patching shall conform to the gradation requirements for Hot Mix Asphalt (Grading SX).

Subsection 403.03 shall include the following:

Delete subsection 403.05 and replace with the following:

403.05 The accepted quantities of hot mix asphalt will be paid for in accordance with subsection 401.22, at the contract unit price per ton for the bituminous mixture.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Hot Mix Asphalt (Patching)	Ton
Hot Mix Asphalt (Grading S)(75)(PG 64-22)	Ton
Hot Mix Asphalt (Grading SX)(75)(PG 64-22)	Ton

Aggregate, asphalt recycling agent, asphalt cement, additives, hydrated lime, and all other work and materials necessary to complete each hot mix asphalt item will not be paid for separately but shall be included in the unit price bid. When the pay item includes the PG binder grade, any change to the submitted mix design optimum asphalt cement content to establish production targets on the Form 43 will not be measured and paid for separately but shall be included in the work. No additional compensation will be considered or paid for any additional asphalt cement, plant modifications and additional personnel required to produce the HMA as a result in a change to the mix design asphalt cement content.

Historically, typical asphalt cement increases reflected on the Form 43 are from 0.1 to 0.5 percent. However, the Contractor should anticipate the AC increases typical of his mixes. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

When the pay item does not include the PG binder grade, asphalt cement will be measured and paid for in accordance with Section 411. Asphalt cement used in Hot Mix Asphalt (Patching) will not be measured and paid for separately, but shall be included in the work.

Excavation, preparation, and tack coat of areas to be patched will not be measured and paid for separately, but shall be included in the work.

**REVISION OF SECTION 412
CONCRETE PAVEMENT (SPECIAL)**

Section 412 of the Standard Specifications is hereby revised for this project as follows:

Subsection 412.02 *shall include the following:*

Concrete Pavement (Special) shall consist of concrete pavement with an integral color admixture. The color shall be Federal Color 20109 “Red Brown”. The Contractor shall submit a concrete color sample and product information to the Engineer for approval prior to construction.

The color admixture shall be incorporated into the concrete according to the manufacturer’s recommendations.

Subsection 412.24 *shall include the following:*

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Concrete Pavement (10 Inch) (Special)	Square Yard

Color admixture and color sample shall be included in the cost of Concrete Pavement (Special).

REVISION OF SECTION 608 SIDEWALKS AND BIKEWAYS

Section 608 of the Standard Specifications is hereby revised as follows:

608.03 Concrete Sidewalks and Bikeways *is hereby revised to include the following:*

(e) *Joints.* Newly constructed curb and gutter shall not be poured monolithically with adjacent curb ramps or sidewalks unless otherwise approved or directed by the Engineer.

REVISION OF SECTION 614 SIGNS AND SIGN POSTS

Section 614 of the Standard Specifications is hereby revised for this project as follows:

Subsection 614.02 shall include the following:

Sign posts and bases shall be steel galvanized perforated square tubing as supplied by Unistrut, or approved equal.

Signs shall use sign posts with 2-inch x 2-inch tube, with bases of 2.25-inch x 2.25-inch tube.

Bases shall be 3 feet long, embedded with 2 inches to 4 inches exposed above the ground, and the post inserted 18 inches to 24 inches into the base.

Subsection 614.09 shall include the following:

Sign panels shall be mounted to sign posts with oversized washers.

Subsection 614.14 shall include the following:

Pay Item	Pay Unit
Steel Sign Post (2 x 2 Inch Telespar Tubing)	Linear Foot

Sign post anchors, hardware and other incidental materials necessary for the proper installation of the item, will not be measured and paid for separately, but shall be included in the cost of the steel sign post.

REVISION OF SECTIONS 627 AND 713
PREFORMED THERMOPLASTIC PAVEMENT MARKING

Section 627 of the Standard Special Provisions is hereby revised for this project as follows:

Subsection 627.09 (a) shall include the following:

- (a) *Application.* An epoxy resin primer shall be applied to any existing surface (concrete, asphalt, existing markings, etc.) prior to the application of any new preformed thermoplastic, plastic pavement marking. The epoxy resin primer shall conform to CDOT Standard Specifications subsection 708.07. Primer shall be required for all markings used including markings that manufacture does not require a primer. Primer and application will not be measured and paid for separately, but shall be included in the work.

Surface shall be dry and free of dirt, dust, chemicals, and/or significant oily substances. Application procedures for Portland concrete pavement shall be as described above except a compatible primer sealer shall be applied before application of marking to assure proper adhesion.

Subsection 627.09 shall include the following:

- (c) *Inlaid Preformed Thermoplastic Pavement Marking.* Shall be done for crosswalks, stop lines and symbols. The grooved width shall be the pavement marking width plus 1 inch, with a tolerance of $\pm \frac{1}{4}$ inch. The depth of the grooves shall be 130 mils \pm 5 mils. Groove position shall be a minimum of 2 inches from the edge of the pavement marking to the longitudinal pavement joint. Grinding of existing preformed thermoplastic pavement marking and the inlaying of proposed preformed thermoplastic pavement marking shall not be measured and paid for separately, but shall be included in the work.

Grooving shall not be performed on bridge decks.

The preformed thermoplastic pavement marking shall be inlaid on new and existing pavements as shown in the Contract. The material shall be capable of use for patching worn areas of the same type according to the manufacturer's recommendations.

The following shall be included in subsection 627.13:

Payment will be made under:

Pay Item

Pay Unit

Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line)

Square Foot

Preformed Thermoplastic Pavement Marking (Word-Symbol)

Square Foot

Removal and application of temporary preformed thermoplastic pavement marking associated with wet-cutting of pavement shall be at the Contractor's expense.

Subsection 713.14 (a) shall include the following:

- (a) *General.* Material such as lines, legends, or symbols shall be capable of being affixed to HMA or PCC pavements. Marking shall be capable of conforming to pavement contours, breaks, and

faults etc. by the use of the normal heat of a propane torch. Marking shall be capable of withstanding the actions of traffic at normal pavement temperatures. Marking shall have resealing characteristics such that it is capable of fusing with itself and previously applied thermoplastic pavement markings when heated with the torch.

Subsection 713.14 shall include the following:

- (c) *Performance.* Marking, when applied in accordance with manufactures recommendations shall demonstrate a uniform level of sufficient night time retro-reflection when tested in accordance to ASTM E1710-97. The applied material must have an initial minimum intensity reading of $500 \text{ mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$ for white and $300 \text{ mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$ for yellow as measured with a retro-reflectometer.

The top surface of the stencils (the same side as the factory applied surface beads) shall have an indicator system for the contractor to properly gauge the correct amount of heat to apply during installation. The indicator system shall have a positive visual indication, such as beads changing color or indents closing together, when the material has reached the correct installation temperature. The indicator system must also provide a positive, visual indication if the material has not reached the correct installation temperature.

REVISION OF SECTION 630 CONSTRUCTION ZONE TRAFFIC CONTROL

Section 630 of the Standard Specifications is hereby revised as follows:

Subsection 630.01 is revised to include the following:

1. Working hours shall be 7:00 a.m. to 7:00 p.m. Monday through Friday, 9:00 AM to 5:00 PM Saturday, and no work on Sunday in all residential areas, or as otherwise approved in writing by the Engineer.
2. Working hours shall be 7:00 a.m. to 7:00 p.m. Monday through Sunday in nonresidential areas.
3. A full closure of Euclid Avenue is acceptable.
4. All work done outside the times above must be approved by the Engineer in writing.

As required by, in descending order of precedence, these plans and special specifications, the current Standard Specifications, as augmented by the Colorado Department of Transportation M and/or S standards, and the current version of the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways.

Subsection 630.10 through 630.11 shall be modified to read:

Traffic control throughout the construction area is the responsibility of the Contractor. Before starting construction, the Contractor shall submit, in writing, the proposed Method of Handling Traffic (MHT) for the initial phase of construction. When a different MHT is required for a subsequent construction phase, it must be submitted two weeks prior to starting that phase. All proposed methods of handling traffic shall be approved, in writing, by the Engineer. No phase of construction shall start until an acceptable MHT has been received and approved by the Engineer. The proposed methods shall include, as a minimum, the following:

A detailed diagram which shows the location of all sign placements, including advance construction signs (if not previously approved) and speed limit signs; method length and time duration for lane closures; and location of flag persons.

A tabulation of all traffic control devices shown in the detailed diagram including, but not limited to: construction signs, vertical panels; vertical panels with lights; Type 1 and Type 2 barricades; cones and drum channelizing devices; concrete barrier (temporary); advance warning flashing or sequencing arrow panels.

Approval of the proposed MHT is intended to indicate all devices to complete the project safely. Such approval does not relieve the contractor of liability specifically assigned to him under the contract. The Contractor shall erect and maintain warning lights, signs, barricades, and sufficient safeguards around all excavations, embankments, stockpiles, equipment, and obstructions.

Non-metallic drums may be substituted for vertical panel channelizing devices if site dimensions allow.

The Contractor shall, at the preconstruction conference, designate one of their employees, other than the Superintendent, to be responsible for traffic control management. This responsibility shall include management for the contractor's signing and all other details covered by the specifications which contribute to the convenience, safety, and orderly movement of traffic and to the comfort of the traveling public. The designated employee will have the Certification of the Traffic Control Supervisor as a Worksite Traffic Supervisor by the American Traffic Safety Services Association (ATSSA) in lieu of completion of the CDOT minimum training requirements.

Traffic control managements shall be maintained on a 24-hour per day basis. The contractor shall make arrangements so that the Traffic Control supervisor or their approved representative will be available on every working day, "on call" at all times and available upon the Engineer's request at other than normal working hours. The Traffic Control Supervisor shall have an up-to-date copy of Part VI of the MUTCD, pertaining to traffic controls for street and highway constructions, and the approved MHT available at all times.

The contractor shall apply for and receive a City of Littleton right-of-way use permit (at no cost to the contractor) prior to commencing operations.

Due to the mobility of the operation, the contractor will need to provide traffic control consistent with the MUTCD. For sweeping operations, the contractor will need to provide an MHT.

The flagger's STOP/SLOW sign paddle shall be 18 inches with letters six inches high.

The Contractor shall provide three (3) variable message boards for the duration of the project to be deployed at the City's direction. Variable message boards shall be placed on westbound Euclid Avenue, northbound Elati Street, and southbound Elati Street. Variable message boards shall be in place two (2) weeks prior to the start of construction.

Specific traffic control requirements for this project are as follows:

- Proposed phasing:
 - Phase 1 – South side of the roadway, including all curb, gutter, sidewalk, signing, striping, and driveway construction.
 - Phase 2 – North side of the roadway, including all curb, gutter, sidewalk, signing, striping, and driveway construction.
- One-way traffic is permitted.
 - During Phase 1 construction, one westbound lane shall be maintained. Unless the contractor is actively constructing or curing curb, gutter, sidewalk, or driveways, residential access shall be maintained between 5:00pm and 8:00am. During periods when driveways will not be accessible, Contractor shall provide residents three (3) days advanced notice.
 - During Phase 2 construction, one eastbound lane shall be maintained.
- Traffic lanes shall be a minimum of 10 feet wide for each phase of construction.
- Sidewalks shall be closed on only one side of the street at a time. When a sidewalk is closed, "Sidewalk Closed" signs shall be placed at the closure point and "Sidewalk Closed Ahead Cross Here" or "Pedestrian Detour" signs shall be placed at the next crosswalk prior. Where

the next crosswalk prior is an unreasonable distance away, the Contractor shall provide a temporary interim crossing.

Subsection 630.13 is revised to include the following:

Towing

Vehicles shall be identified by the Engineer and shall be limited to any class of vehicle that is upright and on wheels. 'No Parking' signs shall have been in-place and maintained for a minimum of forty-eight (48) hours along the proposed street segment prior to towing a vehicle.

The Contractor shall make every reasonable attempt as determined by the Engineer, including but not limited to door-to-door investigation, to locate the owner/operator of the vehicle prior to initiating the towing process.

Towing shall be limited to towing a vehicle conflicting with the current or proposed work activities. Vehicles shall be towed using techniques that do not damage the towed vehicle or the roadway, adjacent structures, or other public property or assets. Vehicles shall be towed to a location designated by the Engineer at the time of towing, typically to an adjacent street beyond the proposed work area. **Towed vehicles shall be positioned in a legal parking space within a public roadway in a manner that permits through traffic.**

Immediately after towing a vehicle, the Contractor shall affix a notice to the windshield or other appropriate place on the motor vehicle, stating "This vehicle was parked within a Temporary Construction Work Zone. It was moved to this location by order of the City of Littleton Public Works.", or similar language approved by the Engineer.

The City shall not grant additional time or compensation for any resulting delays or loss of production because of failure to comply with the requirements of the Contract Documents including posting of notices and identifying and towing vehicles. Initial cost of towing will be the responsibility of the Contractor but can be reimbursed at a later date using the force account for the project if deemed reasonable by the Engineer and documentation of towing tickets can be provided by the Contractor.

Towing Tickets

The Contractor shall deliver a towing ticket identifying the following information:

- Date and time towing request received,
- Make, model, and license number of vehicle towed,
- Locations vehicle towed from and to, and
- Signature of an authorized City Representative with time and date work performed.

Towing Equipment Requirements

Towing equipment shall, at a minimum, be equipped with a power winch, two-way radio, ten-pound dry fire extinguisher, motorcycle sling, dollies or flatbed equipment, and other modern towing and safety devices. All equipment shall be in good working condition when reporting for use.

630.17 METHOD OF MEASUREMENT and 630.16 BASIS OF PAYMENT *are hereby deleted in their entirety and replaced with the following:*

Traffic control shall be paid on a lump sum basis to be paid for as follows: 50 percent of the Schedule amount upon first utilization and the remaining 50 percent of the Schedule amount when 75 percent of the original schedule amount has been earned.

In the event towing services are required, the Contractor shall be reimbursed \$150 per vehicle through the Force Account Item for Minor Contract Revisions. Reimbursement shall be considered full compensation for coordination, mobilization, towing vehicles, mechanical work, fees, fuel, maintenance, and for furnishing all materials, labor, equipment, tools, and incidentals or related services necessary to complete the work. Any towing performed without required signage or pre-authorization will not be paid.

PAY ITEM

Traffic Control

UNIT

Lump Sum

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the City’s estimate for force account items included in the Contract. Such estimated amounts will be added to the total bid to determine the Project Commitment Amount and the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with subsection 109.04. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at \$5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

<u>Force Account Item</u>	<u>Quantity</u>	<u>Estimated Amount</u>
F/A Minor Contract Revisions	F.A.	\$250,000.00

PROJECT DESCRIPTION

The City of Littleton Public Works is concentrating on maintaining and preserving the condition of existing roadway infrastructure throughout the City. This project consists of furnishing all labor, equipment, and some materials necessary to reconstruct, rehabilitate, and maintain West Euclid Avenue between Elati Street and Cherokee Street. The anticipated work includes asphalt paving, sidewalk, concrete curb, gutter, and curb ramps, patching, signage, striping, and adjusting manholes and valves.

LOCATION SCHEDULE

See attached construction documents.

CONSTRUCTION NOTES

Alternative construction sequences may be submitted but are subject to approval by the Engineer. Acceptance of alternatives will be based upon impacts to the public and cost.

Stockpiling location of material must be approved by the Engineer, or a written approval from property owner submitted.

All excess material will be disposed of off-site, or at an approved site by the Engineer.

Due to budget limitations, the City reserves the right to increase or decrease the total quantity to meet their needs. Repricing of the items will not be permitted due to a change in the planned quantity.

Work shall proceed at the direction of the City's Engineer or his designee.

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PoDI / NHS

FHWA PROJECT OF
DIVISION INTEREST (PoDI)?

☒ NO ☐ YES

NATIONAL HIGHWAY SYSTEM?

☒ NO ☐ YES

EUCLID AVE IMPROVEMENTS – PHASE 1

FROM ELATI ST TO CHEROKEE ST

LITTLETON, COLORADO

PUBLIC WORKS & ENGINEERING

LITTLETON PROJECT NO. 23-03

811

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(or 1-800-922-1987)
UTILITY NOTIFICATION
CENTER OF COLORADO (UNCC)
www.uncc.org



TABULATION OF LENGTH		
STATION	LENGTH	
	LINEAR FEET	MILES
ROADWAY IMPROVEMENTS		
BEGIN – STA 0+14.32	1,487.89	0.28
END – STA 15+02.21		
TOTAL PROJECT LENGTH	1,487.89	0.28

LITTLETON DESIGN DATA	
DESIGN SPEED	20 MPH

DESIGNER CERTIFICATION:

I HEREBY CERTIFY THAT THIS GRADING, SEDIMENT AND EROSION CONTROL PLAN WAS PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE PROVISIONS OF THE CITY OF LITTLETON'S STORM DRAINAGE DESIGN AND CRITERIA MANUAL FOR THE OWNERS THEREOF.

ENGINEER OF RECORD SIGNATURE

DATE

STATE OF COLORADO PE NO.

PROPERTY OWNER CERTIFICATION:

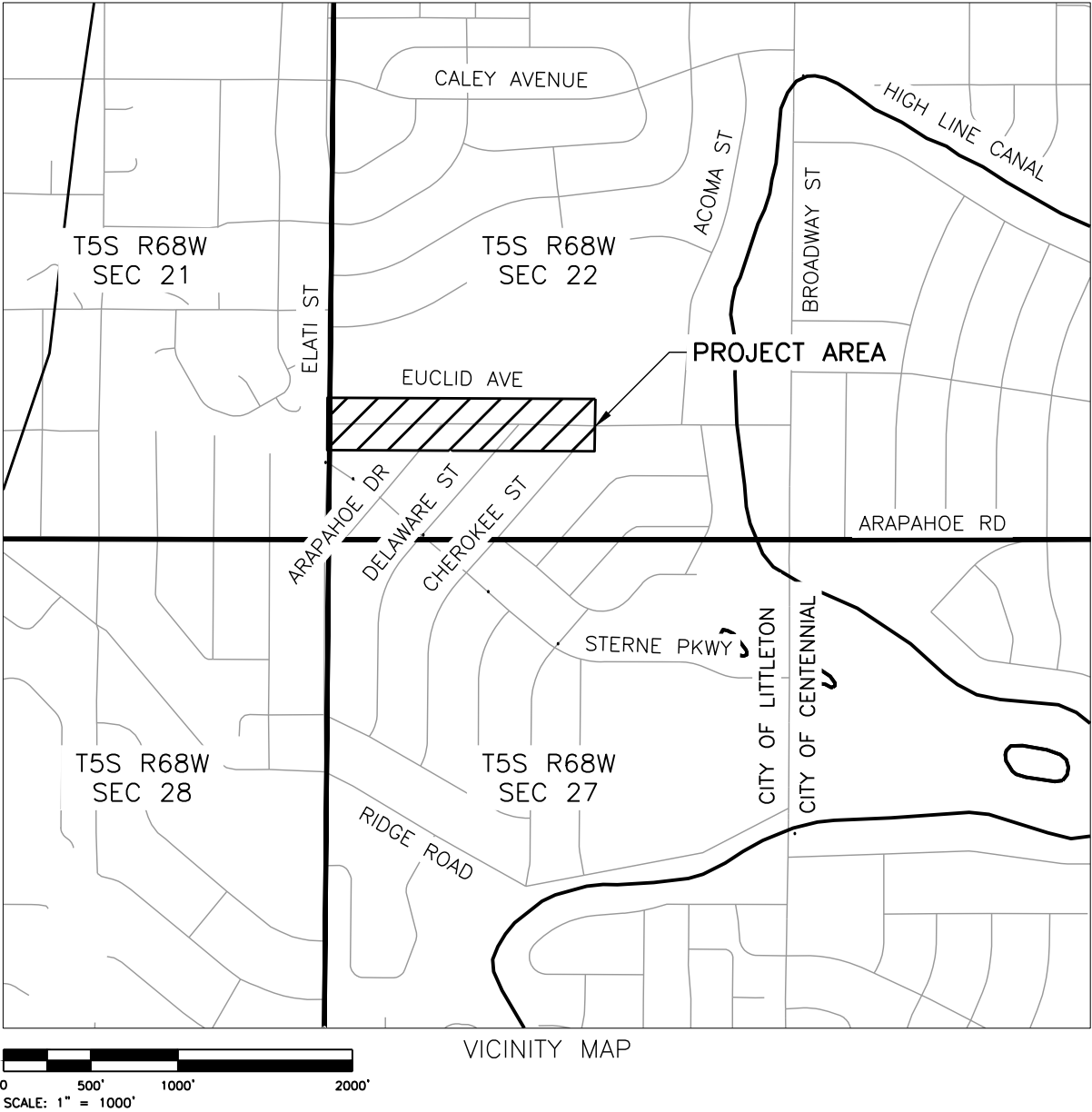
I HEREBY CERTIFY THAT THIS GRADING, SEDIMENT AND EROSION CONTROL PLAN FOR THE EUCLID AVE IMPROVEMENTS PROJECT – PHASE 1 IS MY RESPONSIBILITY TO IMPLEMENT AND MAINTAIN, AND I ACCEPT ALL OF THE TERMS OF THE GRADING, EROSION, AND SEDIMENT CONTROL GENERAL NOTES. I UNDER

PROPERTY OWNER PRINTED NAME

DATE

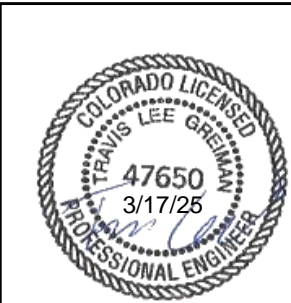
PROPERTY OWNER SIGNATURE

ADDRESS



INDEX OF SHEETS


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2	M&S STANDARDS LIST
3-4	GENERAL NOTES
5-7	SUMMARY OF APPROXIMATE QUANTITIES
8-11	TABULATION OF ROADWAY QUANTITIES
12-14	TYPICAL SECTIONS
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19-24	ROADWAY PLAN AND PROFILES
25-41	ROADWAY DETAILS
42-48	STORM SEWER PLANS
49-51	TABULATION OF SIGNING AND STRIPING
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54-59	GESC PLANS
60	PHASING PLAN



Print Date: 3/13/2025

File Name: 1525-201872.18-CD-01-COVER.dwg

Horizontal Scale: 1"=1,000' Vertical Scale:

 **benesch**

Alfred Benesch & Company
7979 E. Tufts Avenue, Suite 800
Denver, Colorado 80237
303-771-6868

Contract ID 3194

Sheet Revisions		
Date:	Comments	Initials

R-X

 **Littleton**
Colorado

Public Works & Engineering
2255 W Berry Avenue
Littleton, Colorado 80120

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As Constructed		EUCLID AVE IMPROVEMENTS – PHASE 1		Project No.	
No. Revisions:		COVER SHEET		23-03	
Revised:		Designer: LML	Structure Numbers		
Void:		Detailer: LML			
		Sheet Subset: COVER	Subset Sheets: 1 OF 1	Sheet Number: 1 OF 60	

Y:\Colorado\15XX-20S\1525-201872.18_Euclid_School\Eng_Docs\Drawings\Phase 1\1525-201872.18-CD-02-M&S.dwg - Current tab: 2 - Print Time: Thu, 13 Mar 2025 - 12:38pm By: llehto

PLAN NUMBER	M STANDARD TITLE	PAGE NUMBER
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<input type="checkbox"/> M-203-1	APPROACH ROADS	8
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<input checked="" type="checkbox"/> M-208-1	TEMPORARY EROSION CONTROL (11 SHEETS)	19-29 <i>(REVISED ON MAY 16, 2024)</i>
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<input type="checkbox"/> M-606-15	GUARDRAIL TYPE 9 SINGLE SLOPE BARRIER (11 SHEETS)	105-115 <i>(REVISED ON FEBRUARY 17, 2023)</i>
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COLORADO
DEPARTMENT OF TRANSPORTATION

M&S STANDARDS PLANS LIST

July 31, 2019

Revised on December 20, 2024

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

THE M&S STANDARD PLANS USED TO DESIGN THIS PROJECT ARE INDICATED BY A MARKED BOX ☒, AND WILL BE ATTACHED TO THE PLANS. ALL OTHER M&S STANDARD PLANS ARE STILL ELIGIBLE FOR USE IN CONSTRUCTION IF APPROVED BY AN APPROPRIATE CDOT ENGINEER.

PLAN NUMBER	S STANDARD TITLE	PAGE NUMBER
<input type="checkbox"/> S-612-1	DELINEATOR INSTALLATIONS (8 SHEETS)	171-178 <i>(REVISED ON APRIL 30, 2024)</i>
<input type="checkbox"/> S-613-1	ROADWAY LIGHTING (6 SHEETS)	179-186 <i>(REVISED ON SEPTEMBER 30, 2020)</i>
<input type="checkbox"/> S-613-2	ALTERNATIVE ROADWAY LIGHTING (4 SHEETS)	<i>(NEW, ISSUED ON SEPTEMBER 30, 2020)</i>
<input type="checkbox"/> S-613-3	PULL BOX DETAIL (2 SHEETS)	<i>(NEW, ISSUED ON APRIL 4, 2024)</i>
<input type="checkbox"/> S-613-4	TRAFFIC SIGNAL ONE-LINE DIAGRAMS (6 SHEETS)	<i>(NEW, ISSUED ON JUNE 15, 2023)</i>
<input checked="" type="checkbox"/> S-614-1	GROUND SIGN PLACEMENT (2 SHEETS)	187-188 <i>(REVISED ON MARCH 1, 2024)</i>
<input checked="" type="checkbox"/> S-614-2	CLASS I SIGNS	189 <i>(REVISED ON MARCH 1, 2024)</i>
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S-614-9	PEDESTRIAN PUSH BUTTON POST ASSEMBLY (2 SHEETS)	205-206 <i>(SUPERSEDED ON JANUARY 23, 2020 BY S-614-45)</i>
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<input type="checkbox"/> S-614-20	TYPICAL POLE MOUNT SIGN INSTALLATIONS	216 <i>(REVISED ON MARCH 1, 2024)</i>
<input type="checkbox"/> S-614-21	CONCRETE BARRIER SIGN POST INSTALLATIONS (2 SHEETS)	216-217 <i>(REVISED ON SEPTEMBER 21, 2020)</i>
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<input type="checkbox"/> S-614-40	TYPICAL TRAFFIC SIGNAL 30'-75' DOUBLE MAST ARMS 65'-75' SINGLE MAST ARMS (5 SHEETS)	219-223 <i>(REVISED ON JULY 22, 2022)</i>
<input type="checkbox"/> S-614-40A	ALTERNATIVE TRAFFIC SIGNAL 25'-55' SINGLE MAST ARMS (4 SHEETS)	224-227 <i>(REVISED ON JULY 22, 2022)</i>
<input type="checkbox"/> S-614-41	TEMPORARY SPAN WIRE SIGNALS (13 SHEETS)	228-240
<input type="checkbox"/> S-614-42	CABINET FOUNDATION DETAIL (4 SHEETS)	241-244 <i>(REVISED ON APRIL 4, 2024)</i>
<input type="checkbox"/> S-614-43	TRAFFIC LOOP AND MISCELLANEOUS SIGNAL DETAILS (7 SHEETS)	245-252 <i>(REVISED ON APRIL 4, 2024)</i>
<input type="checkbox"/> S-614-44	PEDESTAL POLE SIGNALS (2 SHEETS)	253-254
<input type="checkbox"/> S-614-45	PEDESTRIAN PUSH BUTTON POST ASSEMBLY DETAILS (6 SHEETS)	255-266 <i>(REVISED ON DECEMBER 3, 2020)</i>
<input type="checkbox"/> S-614-50	STATIC SIGN MONOTUBE STRUCTURES (12 SHEETS)	267-280
<input type="checkbox"/> S-614-60	DYNAMIC SIGN MONOTUBE STRUCTURES (14 SHEETS)	281-289 <i>(REV. DEC. 20, 2024)</i>
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<input type="checkbox"/> S-630-1	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION (26 SHEETS)	314-323 <i>(REVISED ON APRIL 30, 2024)</i>
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<input type="checkbox"/> S-630-5	PORTABLE RUMBLE STRIPS (TEMPORARY) (2 SHEETS)	318-319
<input type="checkbox"/> S-630-6	EMERGENCY PULL-OFF AREA (TEMPORARY)	320
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Alfred Benesch & Company
7979 E. Tufts Avenue, Suite 800
Denver, Colorado 80237
303-771-6868

Contract ID 3194

Sheet Revisions		
Date:	Comments	Initials

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Public Works & Engineering
2255 W Berry Avenue
Littleton, Colorado 80120

As Constructed	EUCLID AVE IMPROVEMENTS – PHASE 1			Project No.
No. Revisions:	M&S STANDARDS LIST			23-03
Revised:	Designer: LML	Structure Numbers		
Void:	Detailer: LML			
	Sheet Subset: M&S	Subset Sheets: 1 OF 1		Sheet Number: 2 OF 60

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GRADING, EROSION, AND SEDIMENT CONTROL GENERAL NOTES:


1. THE OPERATOR, PROPERTY OWNER, OR THEIR DESIGNEE IS RESPONSIBLE FOR OBTAINING APPLICABLE PERMITS AND THE INSTALLATION AND MAINTENANCE OF ALL BEST MANAGEMENT PRACTICES (BMPS) FOR EROSION AND SEDIMENT CONTROL, EVEN IF SPECIFIC TASKS MAY BE DESIGNATED TO OTHERS.
2. FOR ALL SITES DISTURBING ONE (1) OR MORE ACRES, THE STATE OF COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) REQUIRES A "STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY" PERMIT. A COPY OF THAT ISSUES PERMIT SHALL BE SUBMITTED TO THE ENGINEERING DIVISION PRIOR TO THE ISSUANCE OF A LOCAL CITY PERMIT.
3. ALL BMPS SHOWN ON THE GRADING, EROSION, AND SEDIMENT (GESC) PLANS SHALL BE INSTALLED PROPERLY AND INSPECTED BY A CITY REPRESENTATIVE PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY ON THE SITE THAT DISTURBS THE GROUND. BMPS SHALL BE INSPECTED, CLEANED, AND MAINTAINED BY THE PROPERTY OWNER OR DESIGNEE AS NEEDED DURING CONSTRUCTION.
4. ISSUANCE OF A GRADING OR BUILDING PERMIT WITH AN APPROVED GESC PLAN PROVIDES AUTHORIZATION FOR THE CITY TO ENTER THE PREMISES FOR PURPOSES OF INSPECTION AND COMPLIANCE WITH THE APPROVED PLANS, PROVISIONS OF MUNICIPAL CODE TITLE 7, CHAPTER 7, AND THE CITY’S STORM DRAINAGE DESIGN AND TECHNICAL CRITERIA.
5. THE CITY MAY REQUIRE THAT THE OPERATOR, PROPERTY OWNER, OR THEIR DESIGNEE PROVIDE ADDITIONAL EROSION OR SEDIMENT CONTROL MEASURES, SHOULD WATER OR WIND EROSION PROBLEMS OCCUR OR SHOULD THE IMPLEMENTED GESC PLAN AND BMPS NOT FUNCTION ADEQUATELY OR AS INTENDED.
6. INSPECTIONS AND NEEDED MAINTENANCE OF BMPS ARE REQUIRED A MINIMUM OF EVERY 14 DAYS AND AFTER STORM EVENTS, OR ALTERNATIVELY EVERY SEVEN (7) DAYS. THE CITY RESERVES THE RIGHT TO REQUIRE THE OPERATOR TO SUBMIT COPIES OF INSPECTION REPORTS OR OTHER STORMWATER MANAGEMENT DOCUMENTS AT ANY TIME.
7. GESC PLANS SHALL ACCOMMODATE CONSTRUCTION PHASING, INCLUDING CLEARING AND GRUBBING, UTILITIES, ROADS, VERTICAL CONSTRUCTION, FINAL GRADING, AND STABILIZATION, AND SHALL HAVE REDUNDANT DOWNSLOPE BMPS IN PLACE TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING ALL PHASES.
8. THE OPERATOR, PROPERTY OWNER, OR THEIR DESIGNEE SHALL BE RESPONSIBLE FOR IMPLEMENTATION AND FIELD UPDATES/CHANGES TO THE GESC PLAN THAT INCLUDES THE PLAN VIEW LAYOUT AND INSTALLATION DETAILS OF APPROPRIATE CONTROL MEASURES AND MAINTENANCE PROCEDURE.
9. IF THE OPERATOR, PROPERTY OWNER, OR THEIR DESIGNEE FAILS TO IMPLEMENT ANY OF THE PROVISIONS OF THE SWMP AND IGNORES THE CITY’S VERBAL OR WRITTEN REQUEST FOR IMMEDIATE REMEDY, THE CITY MAY MAKE ARRANGEMENTS TO HIRE A PRIVATE PROPERTY OWNER OR DESIGNEE TO PERFORM MAINTENANCE, INSTALLATION OR REPLACEMENT OF BMPS, OR CLEAN THE PUBLIC WAYS. CHARGES FOR SERVICES SHALL BE SENT TO THE OPERATOR, PROPERTY OWNER, OR THEIR DESIGNEE FOR PAYMENT. ENFORCEMENT PROCEDURES ARE OUTLINED IN LITTLETON MUNICIPAL CODE 7-7-12.
10. THE CITY MAY ISSUES A "STOP WORK" ORDER TO STOP ANY PERMITTED SITE CONSTRUCTION WORK FROM PROCEEDING UNTIL THE BMPS PROVIDED ON THE GESC PLANS ARE INSTALLED, IMPLEMENTED AS INTENDED, MAINTAINED, OR UNTIL CORRECTIVE MEASURES ARE TAKEN AND ANY NECESSARY CLEANUP IS PERFORMED. THE OWNER BEARS ALL COSTS ASSOCIATED WITH ANY DELAYS IN THE PROJECT.
11. THE OPERATOR, PROPERTY OWNER, OR THEIR DESIGNEE SHALL NOT UTILIZE THE PUBLIC STREET AS A STAGING AREA FOR THE TEMPORARY STORAGE OF BUILDING MATERIALS, EXCAVATED MATERIALS, OR CONSTRUCTION EQUIPMENT, EXCEPT AS APPROVED BY THE CITY. USE OF OFFSITE PRIVATE PROPERTY FOR STAGING MAY BE SUBJECT TO REVIEW BY THE COMMUNITY DEVELOPMENT DEPARTMENT.
12. A CONSTRUCTION DEWATERING DISCHARGE PERMIT SHALL BE OBTAINED FROM CDPHE PRIOR TO PUMPING ANY SURFACE OR SUB-SURFACE WATER INTO ANY CITY PUBLIC WAY OR STORM DRAINAGE SYSTEM. ADEQUATE SEDIMENT CONTROL BMPS SHALL BE REQUIRED AT THE PUMP’S INLET AND OUTLET.
13. ALL SOIL AREAS DISTURBED SHALL BE GRADED, SEEDED, AND MULCHED OR OTHERWISE VEGETATED OR COVERED TO STABILIZE THE GROUND SURFACE WITHIN 14 DAS OF COMPLETION OF GRADING OPERATIONS. THE CITY SHALL APPROVE THE SEED MIX AND RATE OF APPLICATION PRIOR TO SEEDING THE AREA. IF DISTURBED SOIL AREAS ARE TO BE LEFT DORMANT FOR OVER 14 DAYS, A TEMPORARY STABILIZING COVER IS REQUIRED (THE METHOD TO BE APPROVED BY THE CITY). THE WEEDS ARE NOT AN ACCEPTABLE TEMPORARY OR PERMANENT STABILIZATION COVER.
14. BMPS SHALL REMAIN IN-PLACE AND OPERATIONAL UNTIL ALL SITE PAVING, PERMANENT LANDSCAPING, OR ADEQUATE VEGETATIVE COVER ESTABLISHMENT IS COMPLETED. ADEQUATE VEGETATION COVER IS DEFINED AS A UNIFORM VEGETATIVE COVER WITH A PLANT DENSITY (STEM OR STALKS) OF AT LEAST 70% OF THE PRE-DISTURBANCE CONDITION. TEMPORARY IRRIGATION MAY BE NECESSARY TO ESTABLISH PLANT GROWTH. ADEQUATE VEGETATIVE COVER WILL BE DETERMINED BY CITY STAFF WITH AN ON-SITE INSPECTION PRIOR TO ANY PERMIT RELEASE INCLUDING TERMINATION OF A CDPHE STORMWATER PERMIT.
15. AFTER THE SITE HAS BEEN STABILIZED AS DETERMINED BY CITY STAFF, THE OPERATOR, PROPERTY OWNER, OR THEIR DESIGNEE SHALL REMOVE ALL BMPS AND CLEAN UP ANY STORM SEWERS WHERE CONSTRUCTION SEDIMENT MAY HAVE DEPOSITED.



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Date:	Comments	Initials

Littleton

Colorado

Public Works & Engineering
2255 W Berry Avenue
Littleton, Colorado 80120

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As Constructed		EUCLID AVE IMPROVEMENTS – PHASE 1		Project No.
No. Revisions:		GENERAL NOTES		23-03
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Void:		Detailer:	CWD	
Sheet Subset:		NOTES	Subset Sheets:	2 OF 2
				Sheet Number: 4 OF 60

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY/TRAFFIC		DRAINAGE		UTILITIES		PROJECT TOTALS	
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.
202-00018	REMOVAL OF CHASE DRAIN	EA			2				2	
202-00019	REMOVAL OF INLET	EA			1				1	
202-00021	REMOVAL OF MANHOLE	EA					1		1	
202-00035	REMOVAL OF PIPE	LF			175				175	
202-00200	REMOVAL OF SIDEWALK	SY	403						403	
202-00203	REMOVAL OF CURB AND GUTTER	LF	478						478	
202-00204	REMOVAL OF CURB, GUTTER AND SIDEWALK	LF	2572						2572	
202-00206	REMOVAL OF CONCRETE CURB RAMP	SY	88						88	
202-00210	REMOVAL OF CONCRETE PAVEMENT	SY	200						200	
202-00220	REMOVAL OF ASPHALT MAT	SY	6571						6571	
202-00226	REMOVAL OF ASPHALT MAT (SPECIAL)	SY	128						128	
202-00810	REMOVAL OF GROUND SIGN	EA	8						8	
203-00000	UNCLASSIFIED EXCAVATION	CY	3220						3220	
208-00008	EROSION LOG TYPE 2 (12 INCH)	LF	1912						1912	
208-00029	REINFORCED ROCK BERM	LF	28						28	
208-00035	AGGREGATE BAG	LF	96						96	
208-00045	CONCRETE WASHOUT AREA	EA	1						1	
208-00054	STORM DRAIN INLET PROTECTION (TYPE II)	EA	10						10	
208-00070	VEHICLE TRACKING CONTROL	EA	2						2	
208-00200	EROSION CONTROL MANAGEMENT	LS	1						1	



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File Name: 1525-201872.18-CD-04-SOAQ.dwg

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Contract ID 3194

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Sheet Revisions		
Date:	Comments	Initials



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2255 W Berry Avenue
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No. Revisions:

Revised:

Void:

EUCLID AVE IMPROVEMENTS – PHASE 1

SUMMARY OF APPROXIMATE QUANTITIES

Designer: CWD

Detailer: CWD

Sheet Subset: SOAQ

Structure Numbers

Subset Sheets: 1 OF 3

Project No.

23-03

Sheet Number: 5 OF 60

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY/TRAFFIC		DRAINAGE		UTILITIES		PROJECT TOTALS	
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.
210-00067	RESET MONUMENT (TYPE 5)	EA	1						1	
210-00810	RESET GROUND SIGN	EA	4						4	
210-00827	RESET PULL BOX	EA					1		1	
210-04010	ADJUST MANHOLE	EA					8		8	
210-04050	ADJUST VALVE BOX	EA					9		9	
212-01200	LANDSCAPE RESTORATION	LS	1						1	
216-00201	EROSION RETENTION BLANKET (STRAW-COCONUT) (BIODEGRADABLE CLASS 1)	SY	73						73	
304-05007	AGGREGATE BASE COURSE (CLASS 6)	CY	2033						2033	
403-00720	HOT MIX ASPHALT (PATCHING)	TON	35						35	
403-33741	HOT MIX ASPHALT (GRADING S) (75) (PG 64-22)	TON	701						701	
403-34741	HOT MIX ASPHALT (GRADING SX) (75) (PG 64-22)	TON	703						703	
412-00600	CONCRETE PAVEMENT (6 INCH)	SY	488						488	
412-01000	CONCRETE PAVEMENT (10 INCH)	SY	108						108	
412-01001	CONCRETE PAVEMENT (10 INCH) (SPECIAL)	SY	54						54	
503-00018	DRILLED SHAFT 18 INCH	LF	24						24	
603-01185	18 INCH REINFORCED CONCRETE PIPE (CIP)	LF			170				170	
603-01245	24 INCH REINFORCED CONCRETE PIPE (CIP)	LF			1100				1100	
604-16050	INLET TYPE 16 (SINGLE) (SPECIAL)	EA			5				5	
604-16550	INLET TYPE 16 (DOUBLE) (SPECIAL)	EA			2				2	
604-19205	INLET TYPE R L10 (5 FOOT)	EA			1				1	



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EUCLID AVE IMPROVEMENTS – PHASE 1

SUMMARY OF APPROXIMATE QUANTITIES

Designer: CWD

Detailer: CWD

Sheet Subset: SOAQ

Structure Numbers

Subset Sheets: 2 OF 3

Project No.

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Sheet Number: 6 OF 60

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY/TRAFFIC		DRAINAGE		UTILITIES		PROJECT TOTALS	
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.
604-19305	INLET TYPE R L15 (5 FOOT)	EA			1				1	
604-39010	MANHOLE SPECIAL (10 FOOT)	EA			7				7	
608-00000	CONCRETE SIDEWALK	SY	2695						2695	
608-00010	CONCRETE CURB RAMP	SY	207						207	
609-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF	2976						2976	
609-22021	CURB, GUTTER AND SIDEWALK TYPE 2 (SECTION MS)	LF	105						105	
614-00011	SIGN PANEL (CLASS I)	SF	59						59	
614-00012	SIGN PANEL (CLASS II)	SF	63						63	
614-00217	STEEL SIGN POST (2x2 INCH TELES PAR TUBING)	LF	120						120	
614-72860	PEDESTRIAN PUSH BUTTON	EA	4						4	
614-80003	RECTANGULAR RAPID FLASHING BEACON	EA	4						4	
614-84000	TRAFFIC SIGNAL PEDESTRIAN POLE STEEL	EA	4						4	
625-00000	CONSTRUCTION SURVEYING	LS	1						1	
626-00000	MOBILIZATION	LS	1						1	
627-00008	MODIFIED EPOXY PAVEMENT MARKING	GAL	16						16	
627-30210	THERMOPLASTIC PAVEMENT MARKING (XWALK-STOPLINE)	SF	506						506	
627-30405	THERMOPLASTIC PAVEMENT MARKING (WORD-SYMBOL)	SF	112						112	
630-00000	TRAFFIC CONTROL	LS	1						1	
700-70010	F/A MINOR CONTRACT REVISIONS	FA	1						1	



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EUCLID AVE IMPROVEMENTS – PHASE 1

SUMMARY OF APPROXIMATE QUANTITIES

Designer:	CWD	Structure Numbers	
Detailer:	CWD		
Sheet Subset:	SOAQ	Subset Sheets:	3 OF 3

Project No.

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Sheet Number: 7 OF 60

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REMOVAL QUANTITIES												
LOCATION	SIDE	202-00018	202-00019	202-00021	202-00035	202-00200	202-00203	202-00204	202-00206	202-00210	202-00220	202-00226
		REMOVAL OF CHASE DRAIN	REMOVAL OF INLET	REMOVAL OF MANHOLE	REMOVAL OF PIPE	REMOVAL OF SIDEWALK	REMOVAL OF CURB AND GUTTER	REMOVAL OF CURB, GUTTER AND SIDEWALK	REMOVAL OF CONCRETE CURB RAMP	REMOVAL OF CONCRETE PAVEMENT	REMOVAL OF ASPHALT MAT	REMOVAL OF ASPHALT MAT (SPECIAL)
		EA	EA	EA	LF	SY	LF	LF	SY	SY	SY	SY
0+14 TO 14+84	RT/LT										6471	
0+18 TO 0+34	RT/LT		1		175			105	24	3	8	
0+20 TO 0+36	RT							18	11			
0+34 TO 2+36	LT							203	12		38	
0+36 TO 0+71	RT							37		13		
0+71 TO 1+40	RT							69		19		
1+40 TO 2+85	RT							136	5	20		
2+36 TO 2+86	LT					29	41			10		
2+85 TO 4+75	RT							190		10		
2+87 TO 5+68	LT					243	281					
4+75 TO 6+12	RT							138		36		
4+19 TO 4+31	RT/LT											42
5+68 TO 6+48	LT	1		1		68	79					
6+12 TO 6+31	RT							31	10			
6+31 TO 6+94	RT							74	10			
6+48 TO 7+25	LT	1				63	77			9		
6+94 TO 10+51	RT							360		22		
7+25 TO 8+74	LT							149				
8+74 TO 12+48	LT							374			54	
9+19 TO 9+30	RT/LT											43
10+51 TO 10+70	RT							28	8			
10+70 TO 11+26	RT							70	8			
11+26 TO 14+84	RT							358		58		
12+64 TO 12+76	RT/LT											43
12+48 TO 14+80	LT							232				
TOTAL		2	1	1	175	403	478	2572	88	200	6571	128



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EUCLID AVE IMPROVEMENTS - PHASE 1

TABULATION OF ROADWAY QUANTITIES

Designer: LML

Detailer: CWD

Sheet Subset: RDWY TABS

Structure Numbers

Subset Sheets: 1 OF 4

Project No.

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Sheet Number: 8 OF 60

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ROADWAY QUANTITIES										
LOCATION	SIDE	210-00067	210-00827	210-04010	210-04050	412-00600	608-00000	608-00010	609-21020	609-21020
		RESET MONUMENT (TYPE 5)	RESET PULL BOX	ADJUST MANHOLE	ADJUST VALVE BOX	CONCRETE PAVEMENT (6 INCH)	CONCRETE SIDEWALK	CONCRETE CURB RAMP	CURB AND GUTTER TYPE 2 (SECTION II-B)	CURB AND GUTTER TYPE 2 (SECTION II-B)
		EA	EA	EA	EA	SY	SY	SY	LF	LF
0+15 TO 0+49	LT						27	32	19	105
0+16 TO 0+57	RT						37	33	27	
0+25	LT				1					
0+49 TO 2+05	LT						213		156	
0+57 TO 1+16	RT					25	22		59	
0+87	RT			1						
0+98	RT			1						
1+16 TO 2+02	RT					36	39		87	
1+60	LT			1						
2+02 TO 2+83	RT					57	52	13	71	
2+05 TO 2+73	LT					49	41		68	
2+73 TO 3+79	LT						75	14	96	
2+74	LT				1					
2+83 TO 2+92	RT						12		10	
2+92 TO 4+70	RT					64	89		178	
3+39	RT			1						
3+79 TO 6+14	LT					64	314		235	
4+61	LT			1						
4+63	LT			1						
4+70 TO 6+30	RT					42	113	16	190	
6+14 TO 8+40	LT					64	233	14	226	
6+30 TO 6+87	RT						122	16	82	
6+66	RT				1					
6+71	RT				1					
SUBTOTALS		0	0	6	4	401	1389	138	1504	105



Print Date: 3/13/2025

File Name: 1525-201872.18-CD-05-RDWY TABS.dwg

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Void:

EUCLID AVE IMPROVEMENTS - PHASE 1

TABULATION OF ROADWAY QUANTITIES

Designer: LML

Detailer: CWD

Sheet Subset: RDWY TABS

Structure Numbers

Subset Sheets: 2 OF 4

Project No.

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Sheet Number: 9 OF 60

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ROADWAY QUANTITIES										
LOCATION	SIDE	210-00067	210-00827	210-04010	210-04050	412-00600	608-00000	608-00010	609-21020	609-21020
		RESET MONUMENT (TYPE 5)	RESET PULL BOX	ADJUST MANHOLE	ADJUST VALVE BOX	CONCRETE PAVEMENT (6 INCH)	CONCRETE SIDEWALK	CONCRETE CURB RAMP	CURB AND GUTTER TYPE 2 (SECTION II-B)	CURB AND GUTTER TYPE 2 (SECTION II-B)
		EA	EA	EA	EA	SY	SY	SY	LF	LF
6+87 TO 7+77	RT						38	13	81	
7+77 TO 10+68	RT						182	17	311	
8+37	LT				1					
8+40 TO 14+80	LT						787	22	643	
8+54	LT				1					
10+20	LT		1							
10+68 TO 11+93	RT					87	105	17	144	
10+77	RT				1					
11+10	LT	1								
11+11	RT				1					
11+88	RT			1						
11+93 TO 14+84	RT						194		293	
13+35	RT			1						
13+55	LT				1					
SUBTOTALS		1	1	2	5	87	1306	69	1472	0
TOTALS		1	1	8	9	488	2695	207	2976	105



Print Date: 3/13/2025

File Name: 1525-201872.18-CD-05-RDWY TABS.dwg

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Sheet Revisions		
Date:	Comments	Initials



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No. Revisions:

Revised:

Void:

EUCLID AVE IMPROVEMENTS - PHASE 1

TABULATION OF ROADWAY QUANTITIES

Designer: LML

Detailer: CWD

Sheet Subset: RDWY TABS

Structure Numbers

Subset Sheets: 3 OF 4

Project No.

23-03

Sheet Number: 10 OF 60

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PAVEMENT QUANTITIES						
LOCATION	SIDE	304-06007	403-33741	403-34741	412-01000	412-01001
		AGGREGATE BASE COURSE (CLASS 6)	HMA (GRADING S) (75) (PG 64-22)	HMA (GRADING Sx) (75) (PG 64-22)	CONCRETE PAVEMENT (10 INCH)	CONCRETE PAVEMENT (10 INCH) (SPECIAL)
		CY	TON	TON	SY	SY
0+14 TO 14+84	RT/LT	1239	701	701		
0+14 TO 14+84	LT	441				
0+17 TO 6+06	RT	136				
6+29 TO 10+44	RT	102				
10+68 TO 14+84	RT	91				
2+62 TO 2+92	RT/LT	12			54	27
6+77 TO 7+07	RT/LT	12			54	27
9+94 TO 10+06	RT/LT			2		
TOTAL		2033	701	703	108	54

EARTHWORK QUANTITIES			
ITEM NO.	ITEM	UNIT	QUANTITY
203-00010	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY	3,220
FOR INFORMATION ONLY			
	EMBANKMENT MATERIAL	CY	-84
	EMBANKMENT X FACTOR (1.15)	CY	-97
	EXCAVATION (ROADWAY)	CY	3,220
	EXCESS FOR DISPOSAL	CY	3,123

EARTHWORK NOTES:


- HAULING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- THERE IS NO DESIGNATED BORROW SITE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE EMBANKMENT BORROW SITE.
- TOPSOIL WILL BE REQUIRED TO A DEPTH OF 6 INCHES ON AREAS TO BE SEEDED AND SODDED. EXISTING TOPSOIL WITHIN THE LIMITS OF DISTURBANCE MAY BE STRIPPED AND REUSED. STRIPPING AND STOCKPILING EXISTING TOPSOIL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- ON-SITE EXCAVATED MATERIAL MAY NOT BE SUITABLE FOR REUSE ON THE PROJECT. NATIVE MATERIAL SHALL BE TESTED BY THE CONTRACTOR TO CHECK IF IT MEETS THE EMBANKMENT MATERIAL SPECIFICATIONS.
- THE EMBANKMENT COMPACTION FACTOR IS AN ESTIMATE AND HAS NOT BEEN VERIFIED.
- THE EXCAVATION QUANTITY IS APPROXIMATE. THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO VERIFY THE INFORMATION SHOWN OR SHALL MODIFY AND FIELD-FIT THE DESIGN AS NECESSARY.
- EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.



Print Date: 3/13/2025

File Name: 1525-201872.18-CD-05-RDWY TABS.dwg

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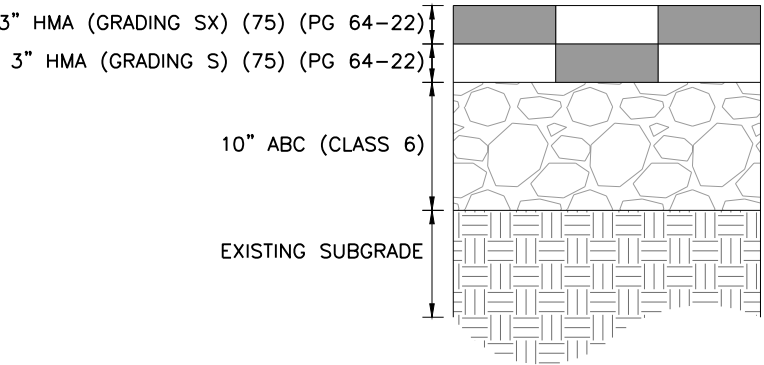
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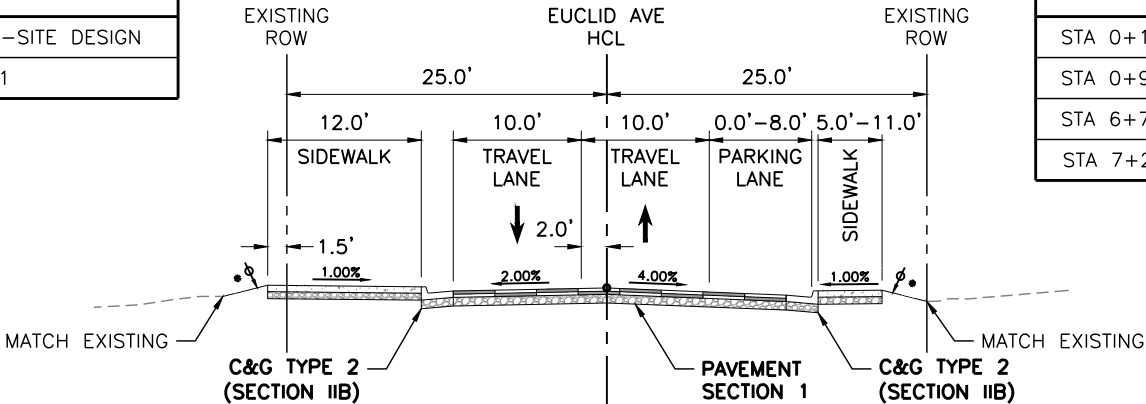
As Constructed	EUCLID AVE IMPROVEMENTS – PHASE 1			Project No.
No. Revisions:	TABULATION OF ROADWAY QUANTITES			23-03
Revised:	Designer: LML	Structure Numbers		
Void:	Detailer: LML			
	Sheet Subset: RDWY TABS	Subset Sheets: 4 OF 4		Sheet Number: 11 OF 60

Y:\Colorado\15X-20S\1525-201872.18_Euclid_School\Eng_Docs\Drawings\Phase 1\1525-201872.18-CD-06-TYPICAL SECTIONS.dwg - Current tab: 12 - Print Time: Thu, 13 Mar 2025 - 12:39pm By: llehto



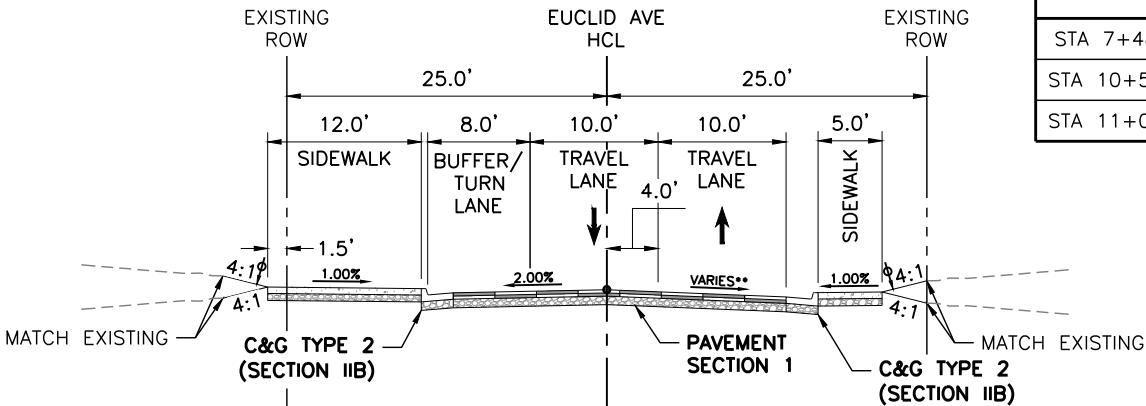
PAVEMENT SECTION 1
HOT MIX ASPHALT

*LT GRADING TABLE	
STA 0+14.32 TO STA 6+68.05	MATCH LPS ON-SITE DESIGN
STA 6+68.05 TO STA 7+48.81	4:1



EUCLID AVE TYPICAL SECTION 1
STA 0+14.32 TO STA 7+48.81
LOOKING EAST
SEE NOTE 2, THIS SHEET

*RT GRADING TABLE	
STA 0+14.32 TO STA 0+95.00	3:1
STA 0+95.00 TO STA 6+72.00	4:1
STA 6+72.00 TO STA 7+25.00	3:1
STA 7+25.00 TO STA 7+48.81	4:1



EUCLID AVE TYPICAL SECTION 2
STA 7+48.81 TO STA 13+68.00
LOOKING EAST

**RT TRAVEL LANE CROSS SLOPE	
STA 7+48.81 TO STA 10+50.83	4%
STA 10+50.83 TO STA 11+04.83	TRANSITION 4% TO 2%
STA 11+04.83 TO STA 13+68.00	2%

LEGEND:

- ⌀ STABILIZE AND REVEGETATE TO THIS LINE WITH 6" OF TOPSOIL UNLESS OTHERWISE DIRECTED
- PROFILE GRADE LINE

NOTES:

- TYPICAL SECTIONS PROVIDE CROSS SECTIONAL ELEMENTS, DEPTHS, WIDTHS, MATERIAL AND APPROXIMATE SLOPES OVER VARYING STATION RANGES. DIMENSION SHOWN ARE TYPICAL. SAWCUT LOCATIONS, CROSS SLOPES, ROADWAY LANE WIDTHS, AND SIDEWALK WIDTH VARY AT SOME LOCATIONS. FOR ADDITIONAL INFORMATION, REFER TO THE ROADWAY PLAN AND PROFILES, ROADWAY DETAILS, AND SIGNING AND STRIPING PLANS.
- LITTLETON PUBLIC SCHOOLS (LPS) IS DESIGNING ON-SITE IMPROVEMENTS (OUTSIDE OF THE RIGHT-OF-WAY) AT EUCLID MIDDLE SCHOOL. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO MATCH ON-SITE, FINISHED GRADE IMPROVEMENTS.



Print Date: 3/13/2025

File Name: 1525-201872.18-CD-06-TYPICAL SECTIONS.dwg

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Contract ID 3194

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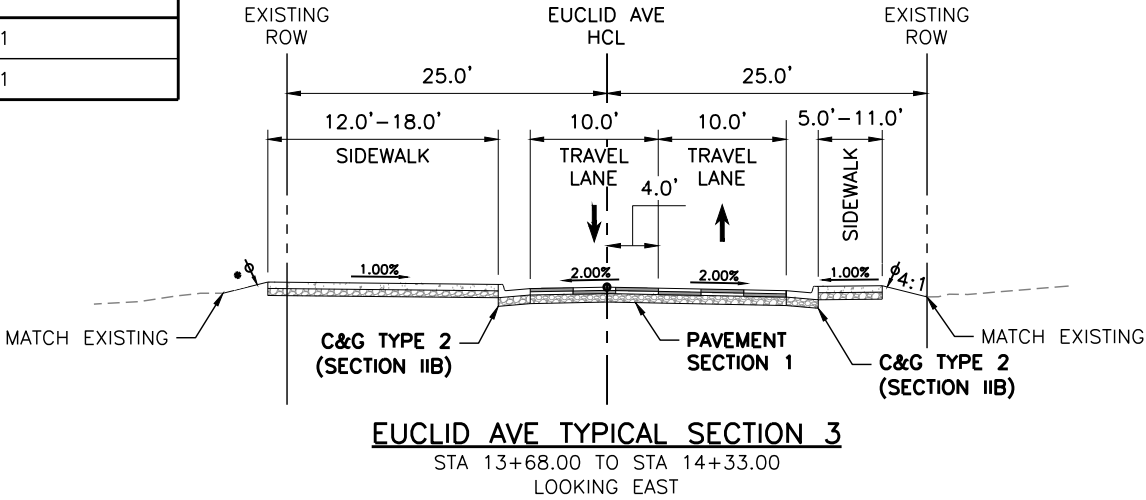
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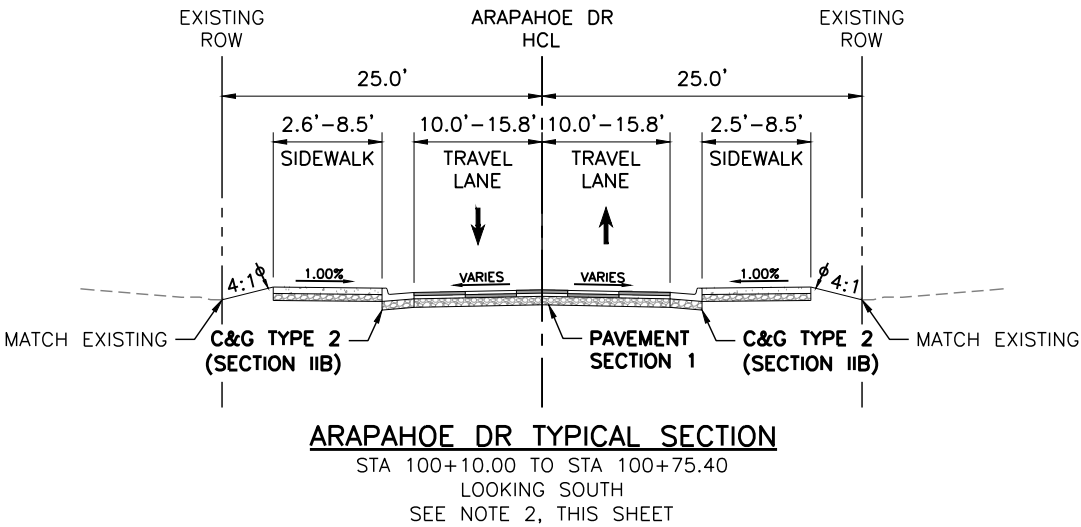
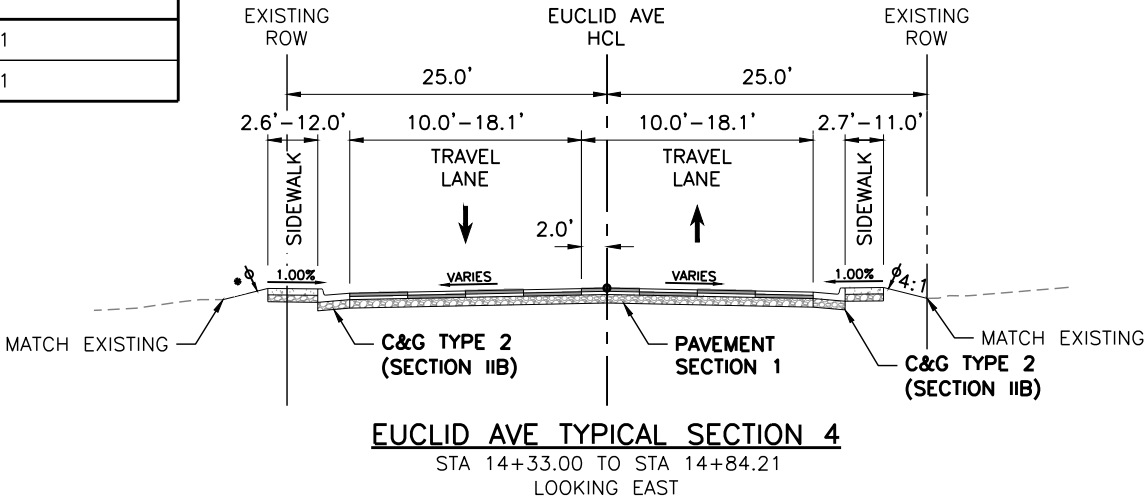
As Constructed		EUCLID AVE IMPROVEMENTS – PHASE 1		Project No.
No. Revisions:		TYPICAL SECTIONS		23-03
Revised:		Designer: LML	Structure Numbers	
Void:		Detailer: LML		
		Sheet Subset: TYPICALS	Subset Sheets: 1 OF 3	Sheet Number: 12 OF 60

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*LT GRADING TABLE	
STA 13+68.00 TO STA 14+10.00	4:1
STA 14+10.00 TO STA 14+33.00	3:1



*LT GRADING TABLE	
STA 14+33.00 TO STA 14+60.00	3:1
STA 14+60.00 TO STA 14+84.21	4:1



- LEGEND:**
- STABILIZE AND REVEGETATE TO THIS LINE WITH 6" OF TOPSOIL UNLESS OTHERWISE DIRECTED
 - PROFILE GRADE LINE

- NOTES:**
1. TYPICAL SECTIONS PROVIDE CROSS SECTIONAL ELEMENTS, DEPTHS, WIDTHS, MATERIAL AND APPROXIMATE SLOPES OVER VARYING STATION RANGES. DIMENSION SHOWN ARE TYPICAL. SAWCUT LOCATIONS, CROSS SLOPES, ROADWAY LANE WIDTHS, AND SIDEWALK WIDTH VARY AT SOME LOCATIONS. FOR ADDITIONAL INFORMATION, REFER TO THE ROADWAY PLAN AND PROFILES, ROADWAY DETAILS, AND SIGNING AND STRIPING PLANS.
 2. THE STATION RANGE PROVIDED FOR ARAPAHOE DR IS APPROXIMATE. EXISTING TOPOGRAPHIC SURVEY ENDS PRIOR TO THE NOTED STATION TIE-IN LOCATION. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO DETERMINE IF THE TIE-IN LOCATION SHOULD BE MODIFIED.



Print Date: 3/13/2025

File Name: 1525-201872.18-CD-06-TYPICAL SECTIONS.dwg

Horizontal Scale: 1"=15' Vertical Scale:

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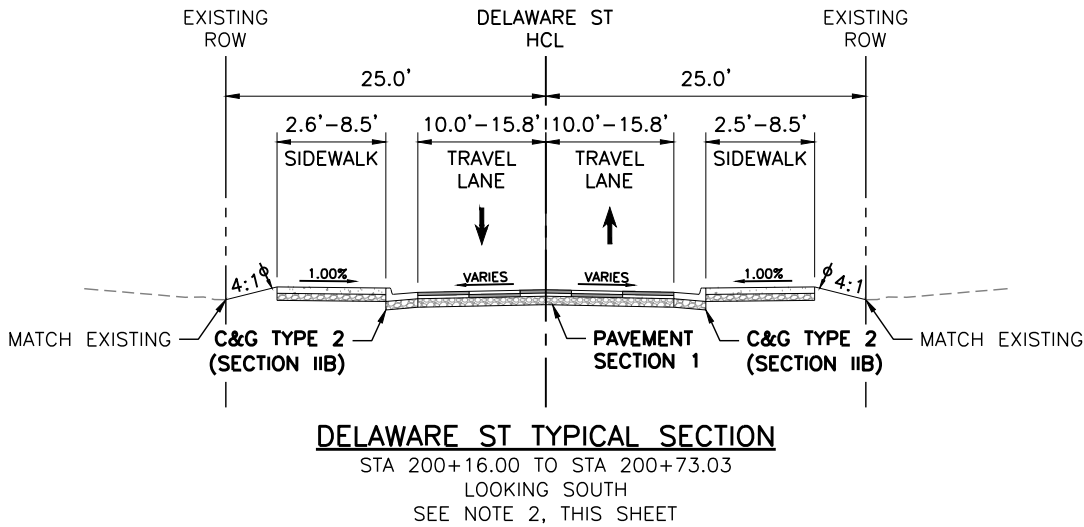
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Sheet Revisions		
Date:	Comments	Initials

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No. Revisions:		TYPICAL SECTIONS		23-03	
Revised:		Designer: LML	Structure Numbers		
Void:		Detailer: LML			
Sheet Subset: TYPICALS		Subset Sheets: 2 OF 3		Sheet Number: 13 OF 60	

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- LEGEND:**
- ⌀ STABILIZE AND REVEGETATE TO THIS LINE WITH 6" OF TOPSOIL UNLESS OTHERWISE DIRECTED
 - PROFILE GRADE LINE


- NOTES:**
- TYPICAL SECTIONS PROVIDE CROSS SECTIONAL ELEMENTS, DEPTHS, WIDTHS, MATERIAL AND APPROXIMATE SLOPES OVER VARYING STATION RANGES. DIMENSION SHOWN ARE TYPICAL. SAWCUT LOCATIONS, CROSS SLOPES, ROADWAY LANE WIDTHS, AND SIDEWALK WIDTH VARY AT SOME LOCATIONS. FOR ADDITIONAL INFORMATION, REFER TO THE ROADWAY PLAN AND PROFILES, ROADWAY DETAILS, AND SIGNING AND STRIPING PLANS.
 - THE STATION RANGE PROVIDED FOR DELAWARE ST IS APPROXIMATE. EXISTING TOPOGRAPHIC SURVEY ENDS PRIOR TO THE NOTED STATION TIE-IN LOCATION. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO DETERMINE IF THE TIE-IN LOCATION SHOULD BE MODIFIED.



Print Date: 3/13/2025

File Name: 1525-201872.18-CD-06-TYPICAL SECTIONS.dwg

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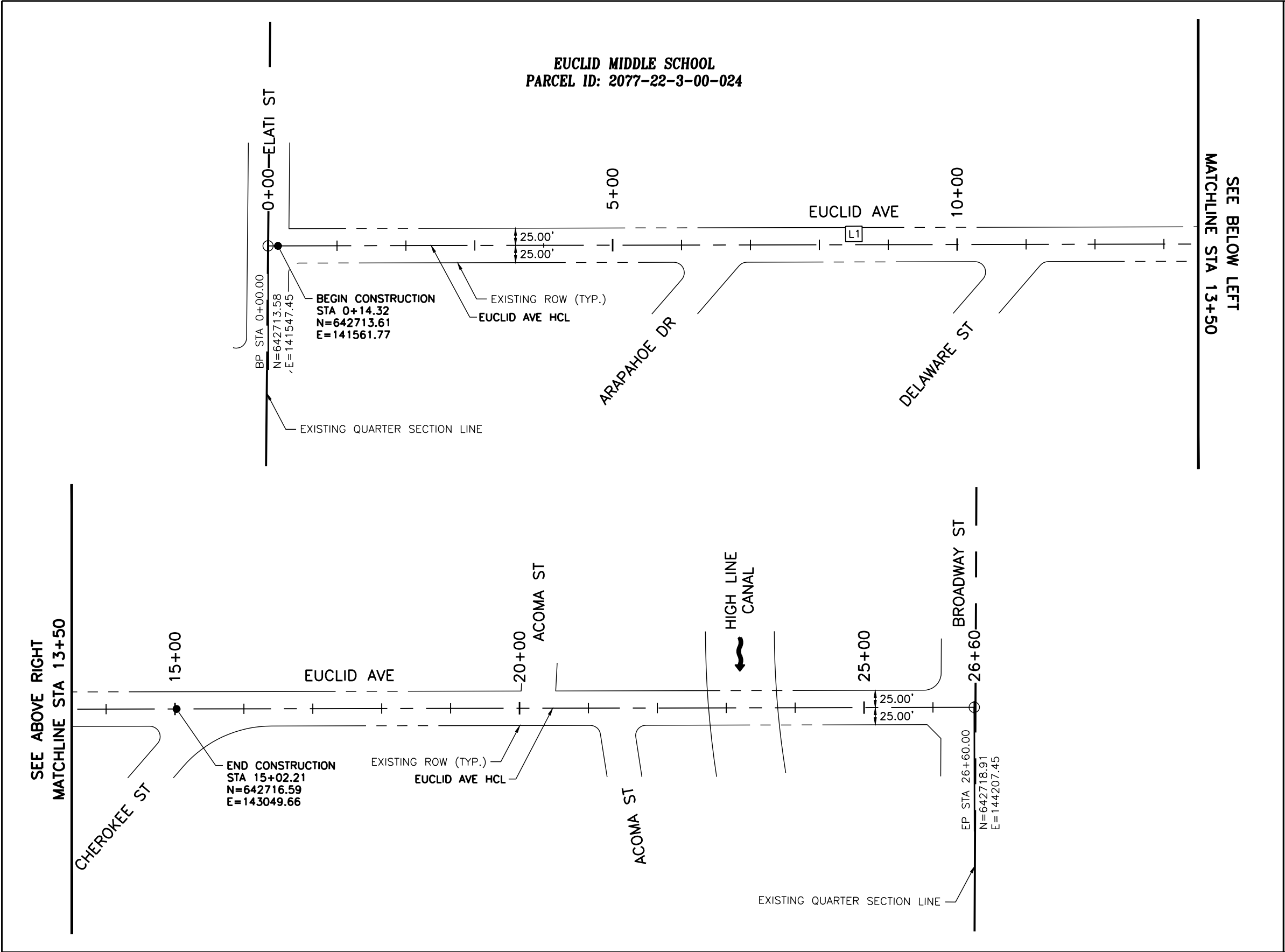
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No. Revisions:		TYPICAL SECTIONS		23-03
Revised:	Designer: LML	Structure Numbers		
Void:	Detailer: LML			
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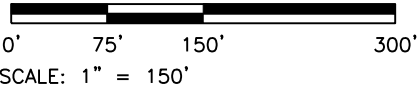
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LINE DATA TABLE		
LINE #	LENGTH	DIRECTION
L1	2660.00	N89° 53' 07"E

NOTES:

1. HORIZONTAL CONTROL LINE INFORMATION FOR ARAPAHOE DR AND DELAWARE ST CAN BE FOUND ON SHEET 16.



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File Name: 1525-201872.18-CD-07-HCL PLAN.dwg

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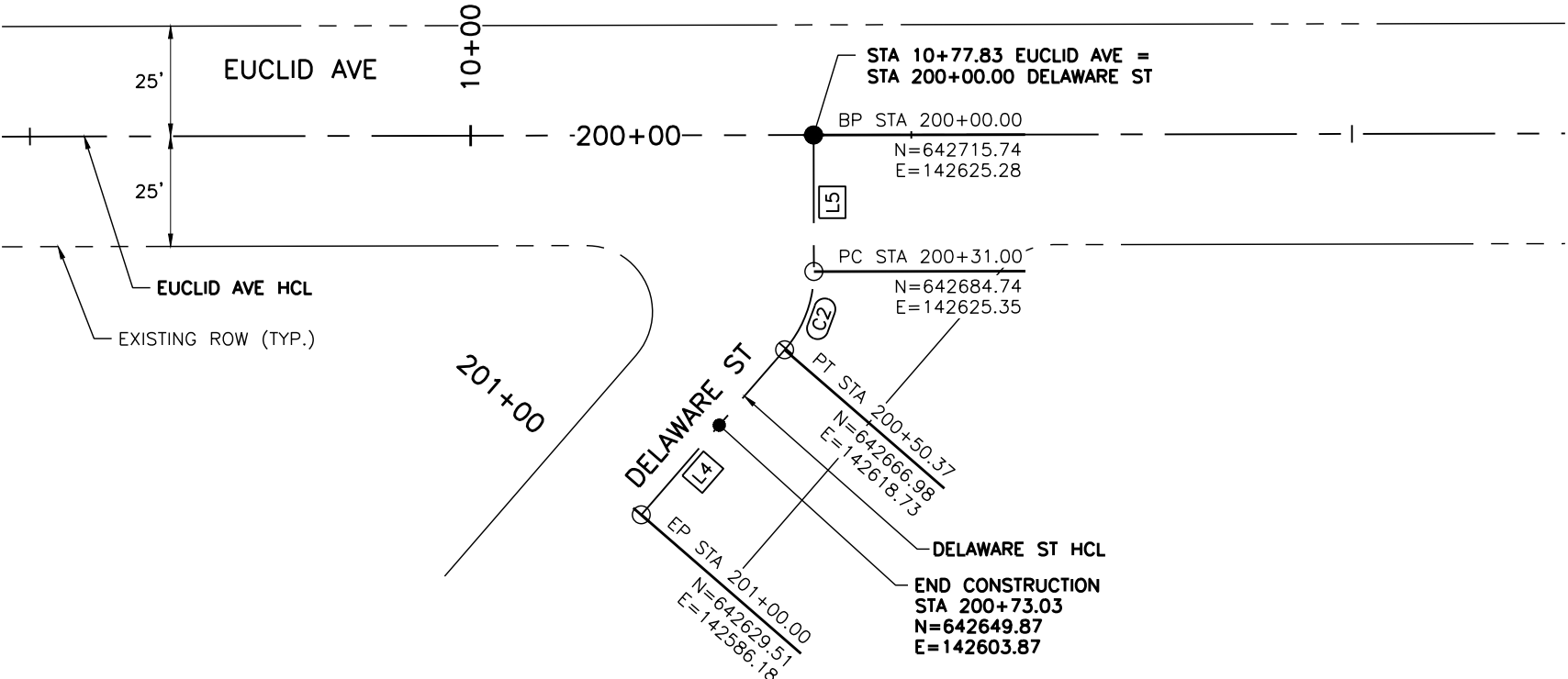
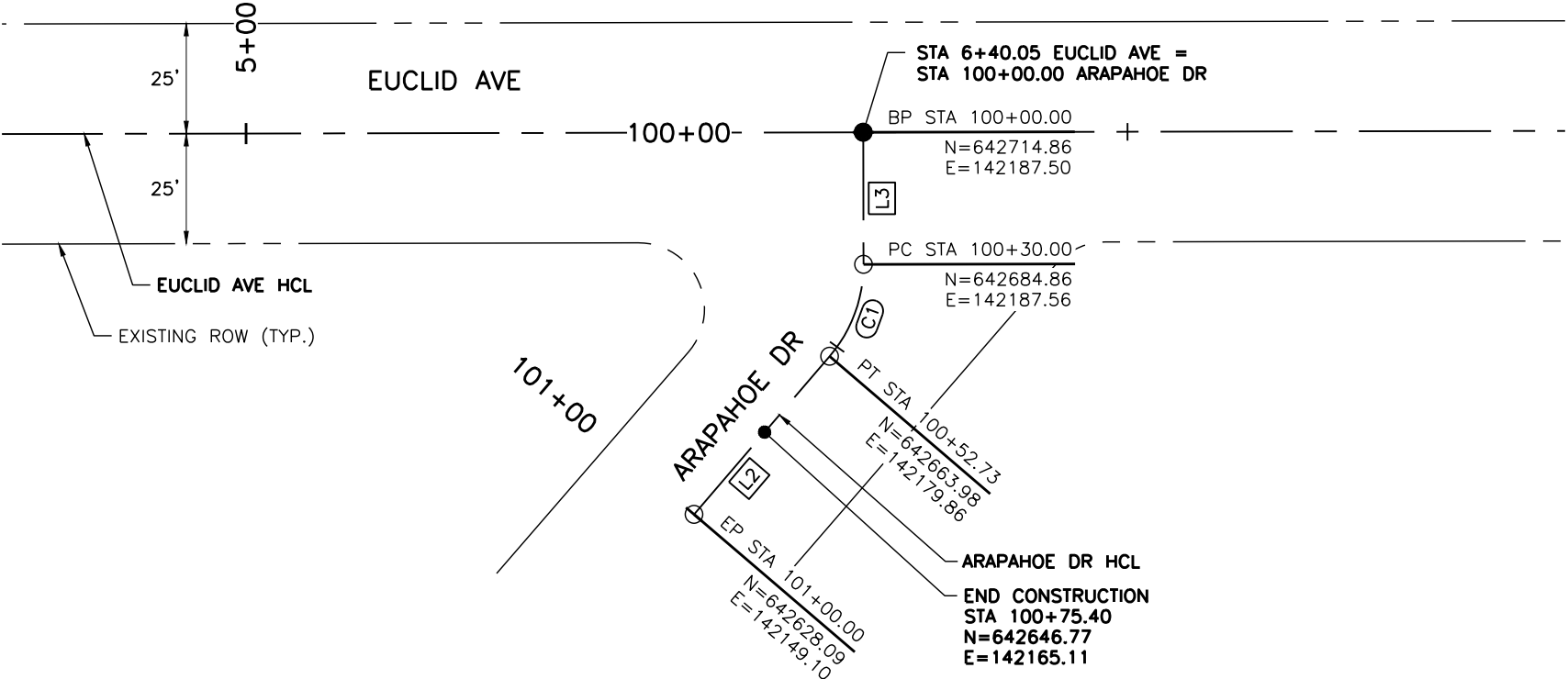
Sheet Revisions		
Date:	Comments	Initials

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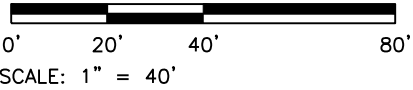
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No. Revisions:		HORIZONTAL CONTROL PLANS			23-03	
Revised:		Designer:	LML	Structure Numbers		
Void:		Detailer:	LML			
		Sheet Subset:	HCL	Subset Sheets:	1 OF 2	Sheet Number: 15 OF 60

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LINE DATA TABLE		
LINE #	LENGTH	DIRECTION
L2	47.27	S40° 35' 25"W
L3	30.00	S00° 06' 53"E
L4	49.63	S40° 59' 02"W
L5	31.00	S00° 06' 53"E


CURVE DATA TABLE				
CURVE #	RADIUS	LENGTH	DELTA	TANGENT
C1	32.00	22.73	40° 42' 20"	11.87
C2	27.00	19.37	41° 05' 50"	10.12



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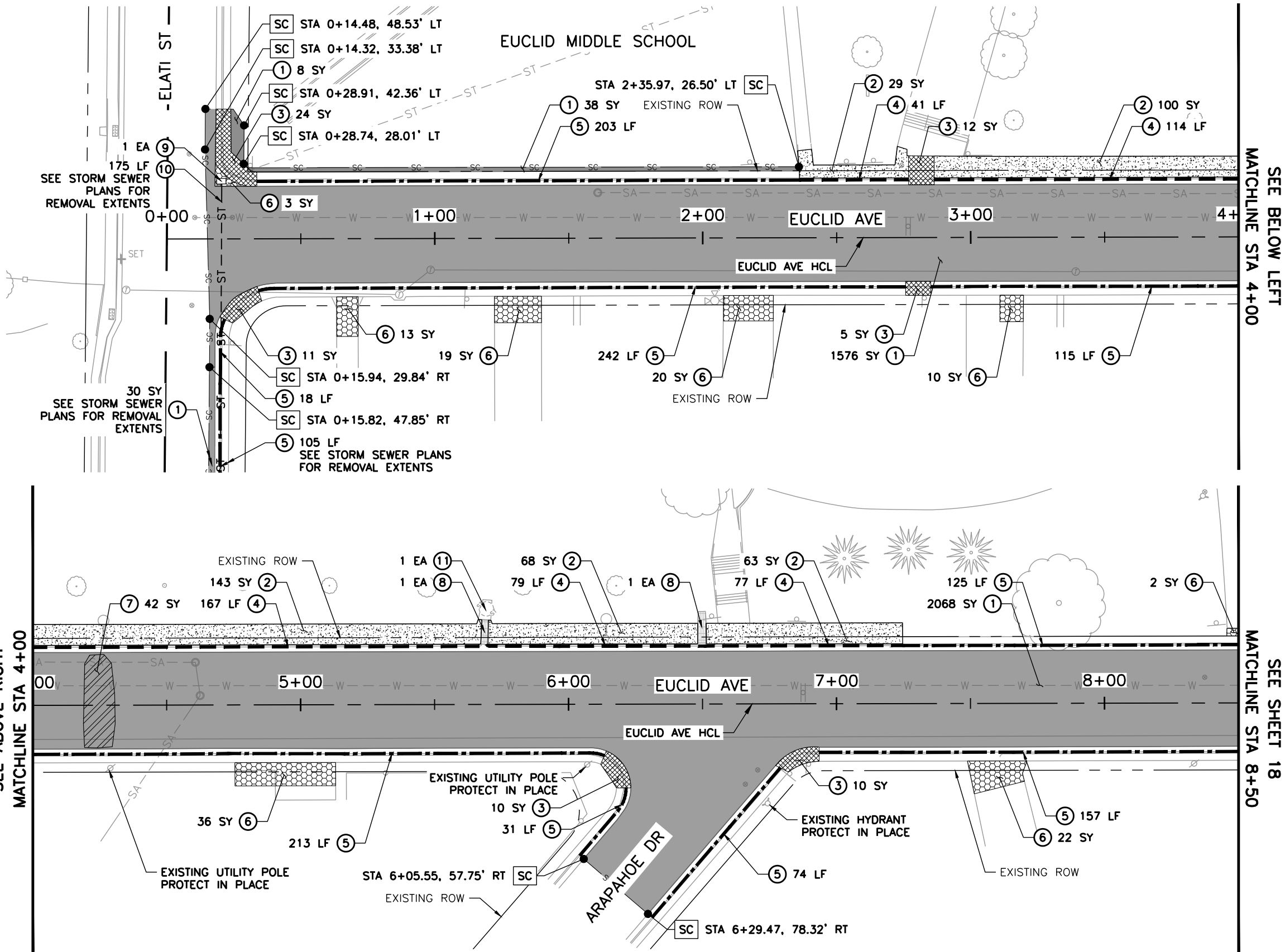


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No. Revisions:		HORIZONTAL CONTROL PLANS		23-03
Revised:		Designer: LML	Structure Numbers	
Void:		Detailer: LML		
Sheet Subset:		HCL	Subset Sheets: 2 OF 2	Sheet Number: 16 OF 60

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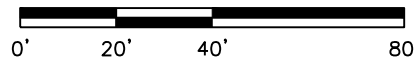


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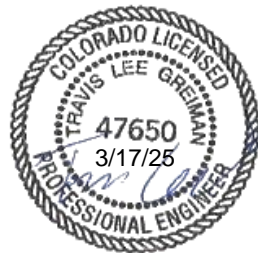
- SC — SAWCUT (SC) LIMITS
- ① REMOVAL OF ASPHALT MAT
- ② REMOVAL OF SIDEWALK
- ③ REMOVAL OF CONCRETE CURB RAMP
- ④ REMOVAL OF CURB AND GUTTER
- ⑤ REMOVAL OF CURB, GUTTER AND SIDEWALK
- ⑥ REMOVAL OF CONCRETE PAVEMENT
- ⑦ REMOVAL OF ASPHALT MAT (SPECIAL)
- ⑧ REMOVAL OF CHASE DRAIN
- ⑨ REMOVAL OF INLET
- ⑩ REMOVAL OF PIPE
- ⑪ REMOVAL OF MANHOLE

NOTES:

1. SAWCUTTING SHALL BE INCLUDED IN THE COST OF REMOVAL OF ASPHALT MAT.



SCALE: 1" = 40'



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REMOVAL PLANS

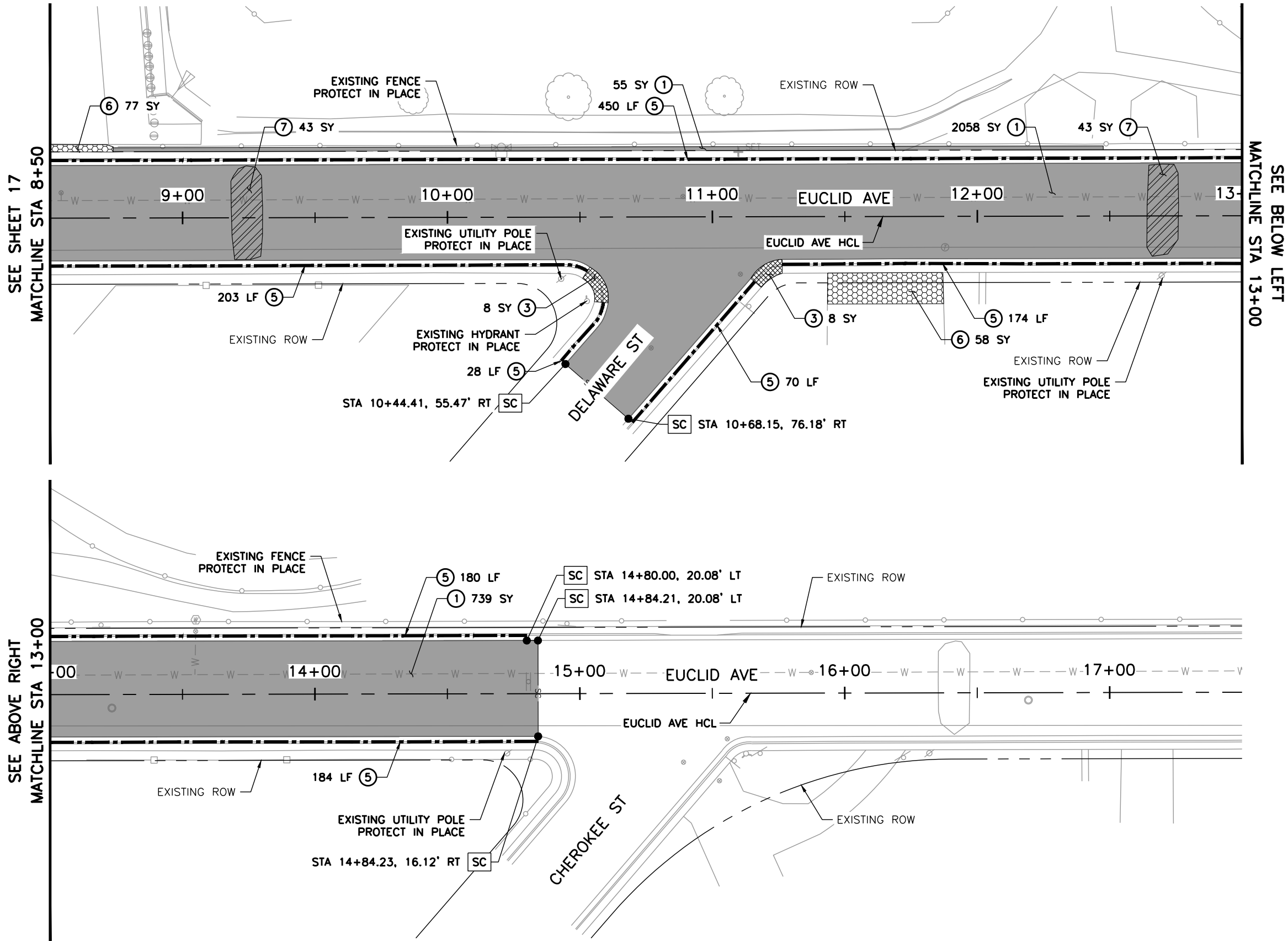
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Detailer:	CWD		
Sheet Subset:	DEMO	Subset Sheets:	1 OF 2

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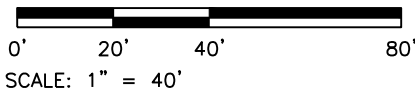


LEGEND:

- SC — SAWCUT (SC) LIMITS
- ① REMOVAL OF ASPHALT MAT
- ② REMOVAL OF SIDEWALK
- ③ REMOVAL OF CONCRETE CURB RAMP
- ④ REMOVAL OF CURB AND GUTTER
- ⑤ REMOVAL OF CURB, GUTTER AND SIDEWALK
- ⑥ REMOVAL OF CONCRETE PAVEMENT
- ⑦ REMOVAL OF ASPHALT MAT (SPECIAL)
- ⑧ REMOVAL OF CHASE DRAIN
- ⑨ REMOVAL OF INLET
- ⑩ REMOVAL OF PIPE
- ⑪ REMOVAL OF MANHOLE

NOTES:

- SAWCUTTING SHALL BE INCLUDED IN THE COST OF REMOVAL OF ASPHALT MAT.



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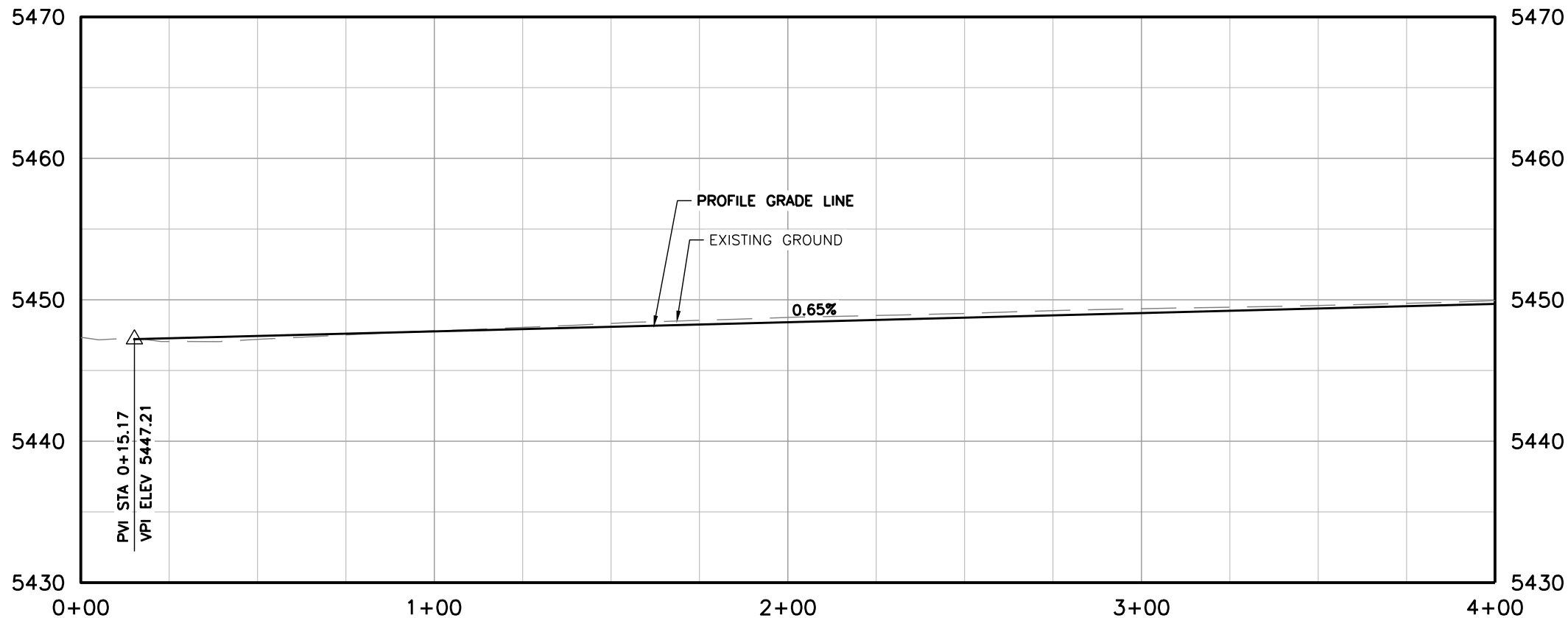
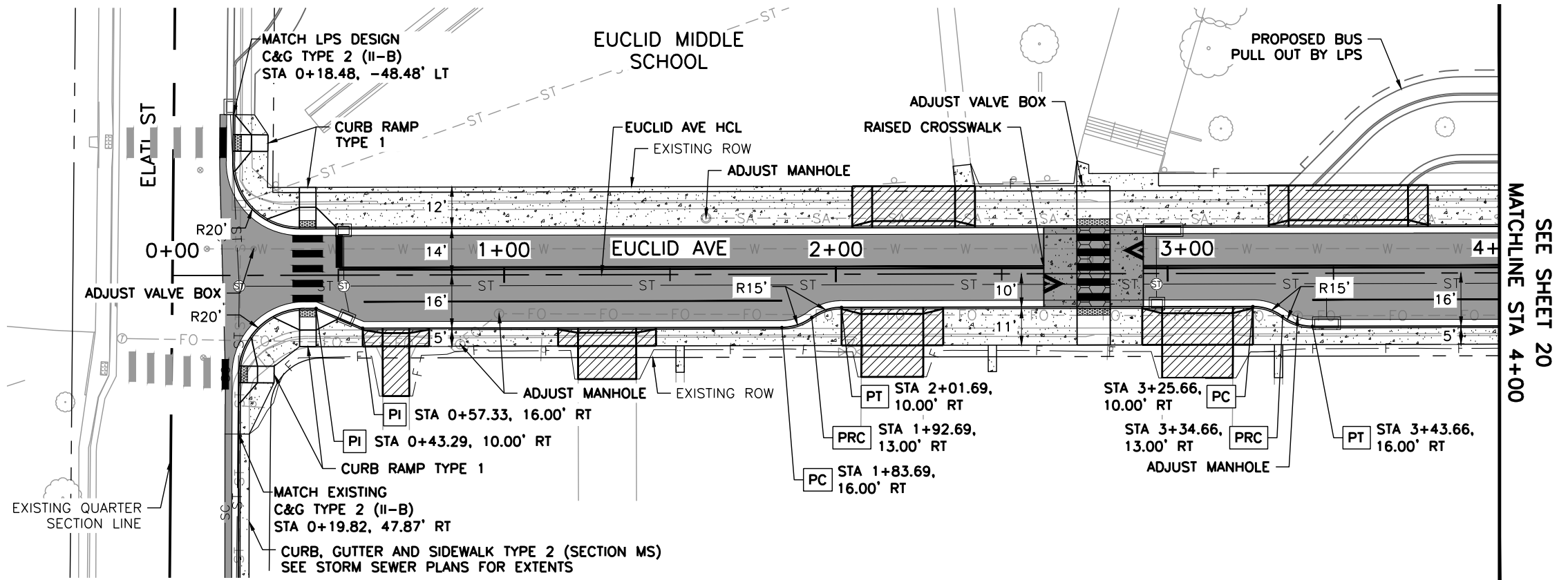
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EUCLID AVE IMPROVEMENTS - PHASE 1		
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LEGEND:

- HOT MIX ASPHALT
- CONCRETE PAVEMENT (6 INCH)
- CONCRETE PAVEMENT (10 INCH)
- CONCRETE PAVEMENT (SPECIAL)
- CONCRETE SIDEWALK (6 INCH)

- SC— SAWCUT LIMITS
- F— TOE OF FILL
- C— TOP OF CUT

NOTES:

- ALL STATION, OFFSET CALLOUTS REFERENCE THE EUCLID AVE HCL AND ARE TO THE FLOWLINE.
- ALL RADIAL DIMENSIONS ARE TO THE FLOWLINE.
- LITTLETON PUBLIC SCHOOLS (LPS) IS DESIGNING ON-SITE IMPROVEMENTS (OUTSIDE OF THE RIGHT-OF-WAY) AT EUCLID MIDDLE SCHOOL. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO MATCH ON-SITE, FINISHED GRADE IMPROVEMENTS.
- REFER TO THE ROADWAY DETAIL SHEETS FOR ADDITIONAL INFORMATION NOT PROVIDED ON THE ROADWAY PLAN AND PROFILE SHEETS.

0' 20' 40' 80'
SCALE: 1" = 40'



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File Name: 1525-201872.18-CD-09.1-RDWAY PNP-EUCLID.dwg
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Date:	Comments	Initials

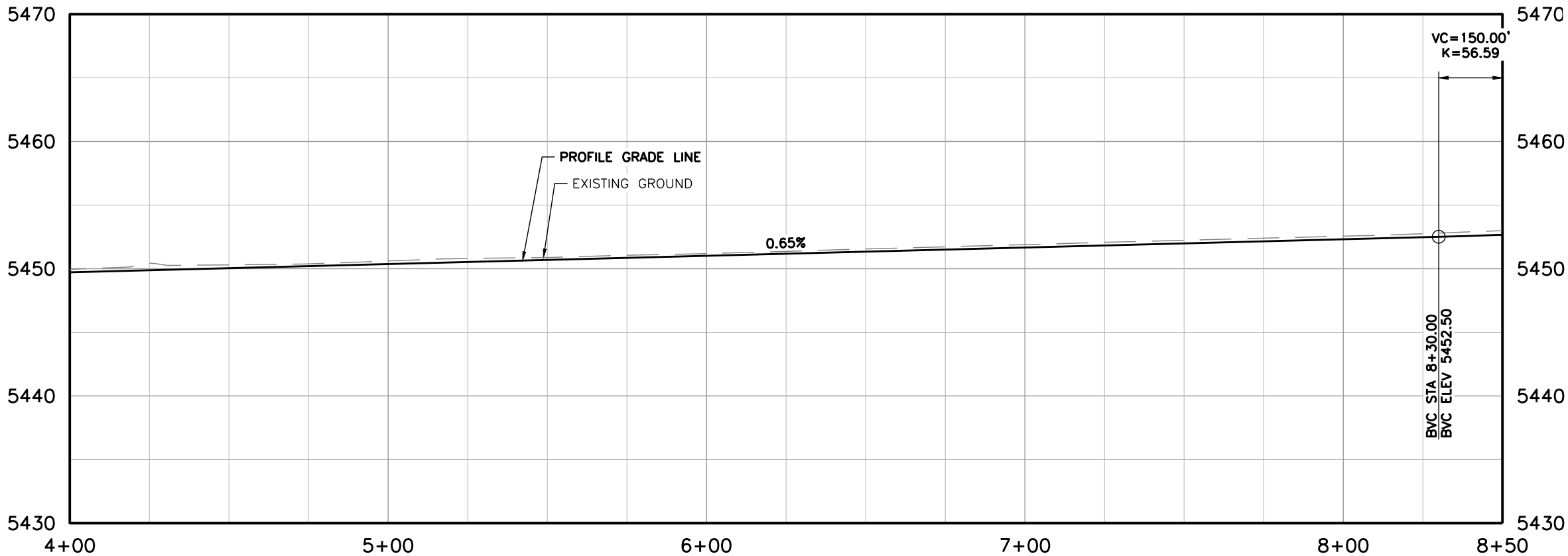
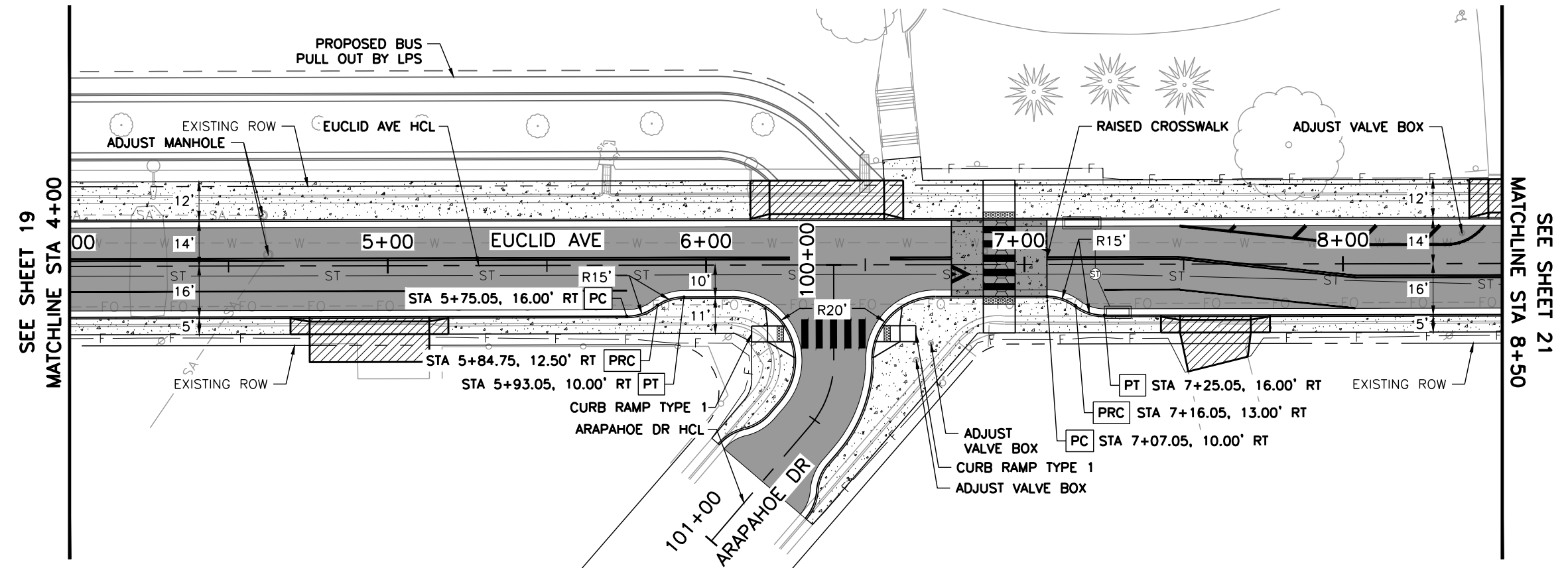
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EUCLID AVE IMPROVEMENTS – PHASE 1 ROADWAY PLAN AND PROFILES EUCLID AVE			
Designer:	LML	Structure Numbers	
Detailer:	LML		
Sheet Subset:	RDWAY PNP	Subset Sheets:	1 OF 6

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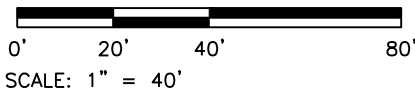
LEGEND:

- HOT MIX ASPHALT
- CONCRETE PAVEMENT (6 INCH)
- CONCRETE PAVEMENT (10 INCH)
- CONCRETE PAVEMENT (SPECIAL)
- CONCRETE SIDEWALK (6 INCH)

- SC— SAWCUT LIMITS
- F— TOE OF FILL
- C— TOP OF CUT

NOTES:

- ALL STATION, OFFSET CALLOUTS REFERENCE THE EUCLID AVE HCL AND ARE TO THE FLOWLINE.
- ALL RADIAL DIMENSIONS ARE TO THE FLOWLINE.
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- REFER TO THE ROADWAY DETAIL SHEETS FOR ADDITIONAL INFORMATION NOT PROVIDED ON THE ROADWAY PLAN AND PROFILE SHEETS.



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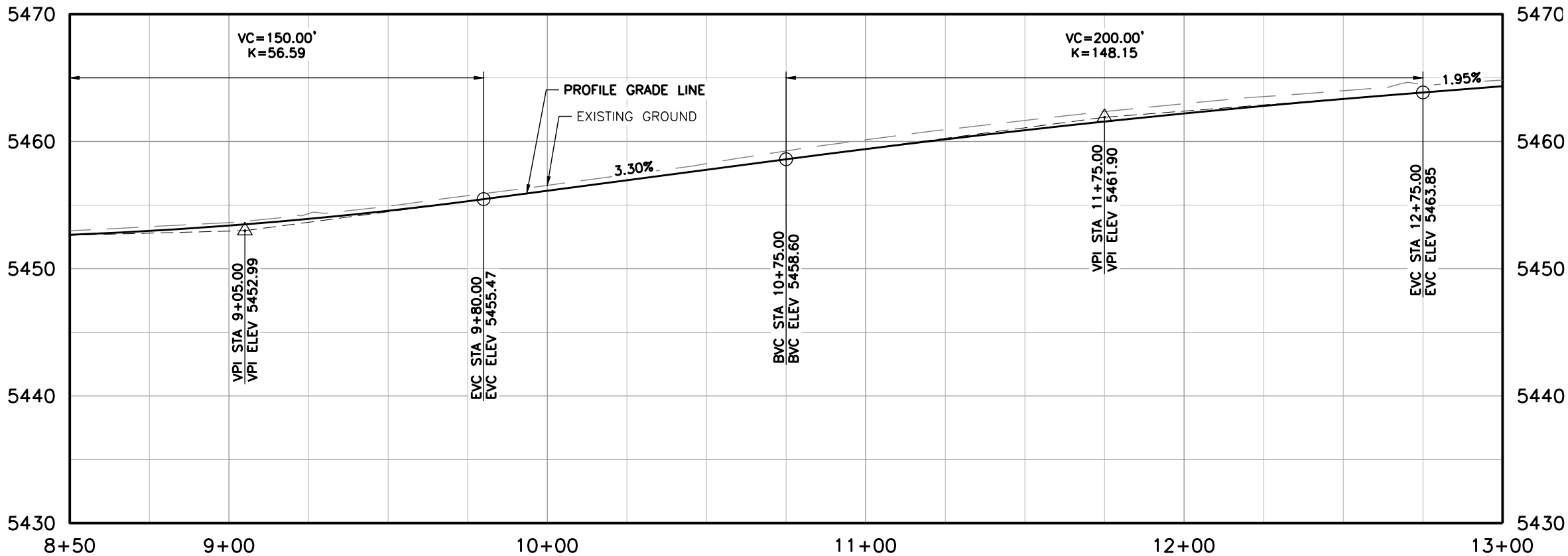
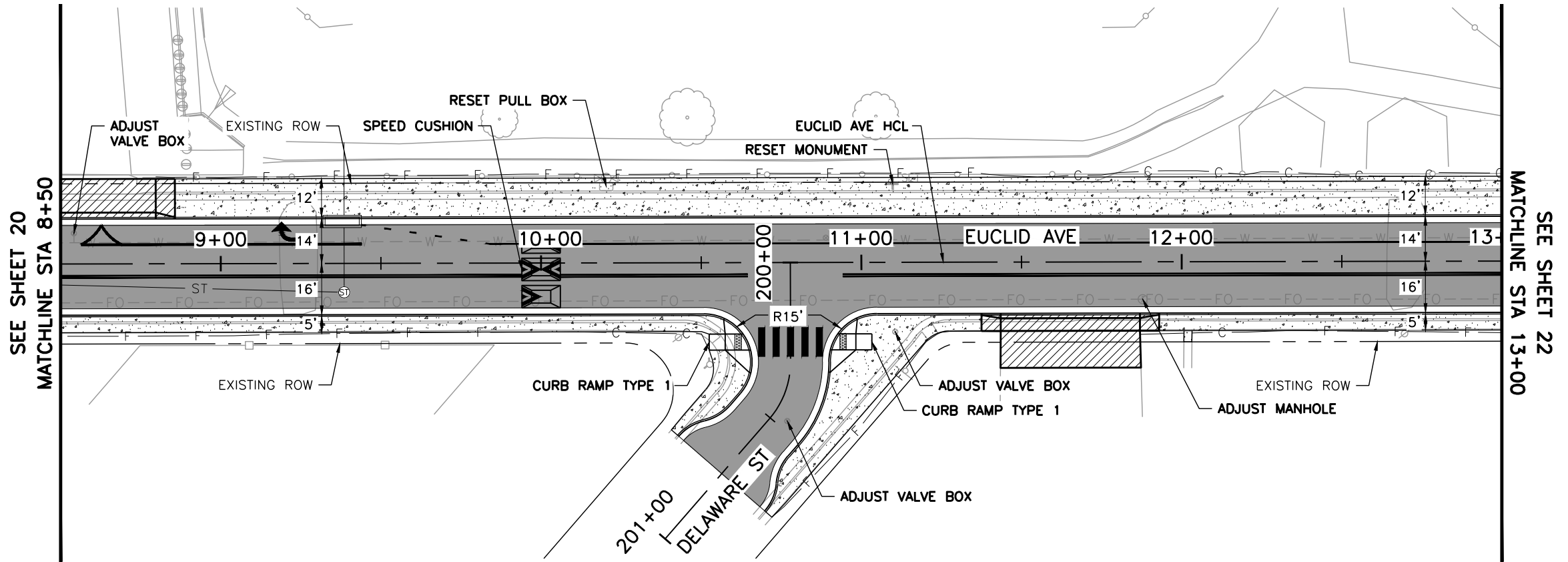
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No. Revisions:				23-03
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Void:		Detailer: LML		
		Sheet Subset: RDWY PNP	Subset Sheets: 2 OF 6	Sheet Number: 20 OF 60

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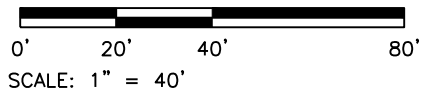
LEGEND:

- HOT MIX ASPHALT
- CONCRETE PAVEMENT (6 INCH)
- CONCRETE PAVEMENT (10 INCH)
- CONCRETE PAVEMENT (SPECIAL)
- CONCRETE SIDEWALK (6 INCH)

- SC— SAWCUT LIMITS
- F— TOE OF FILL
- C— TOP OF CUT

NOTES:

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- REFER TO THE ROADWAY DETAIL SHEETS FOR ADDITIONAL INFORMATION NOT PROVIDED ON THE ROADWAY PLAN AND PROFILE SHEETS.



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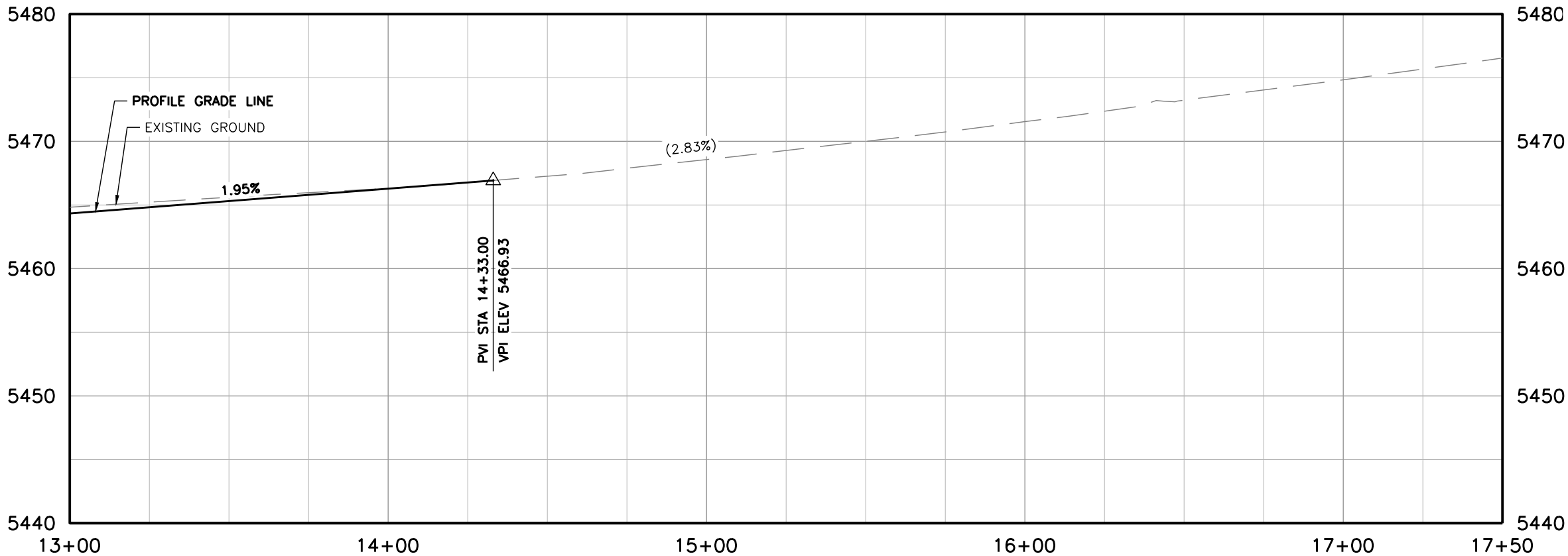
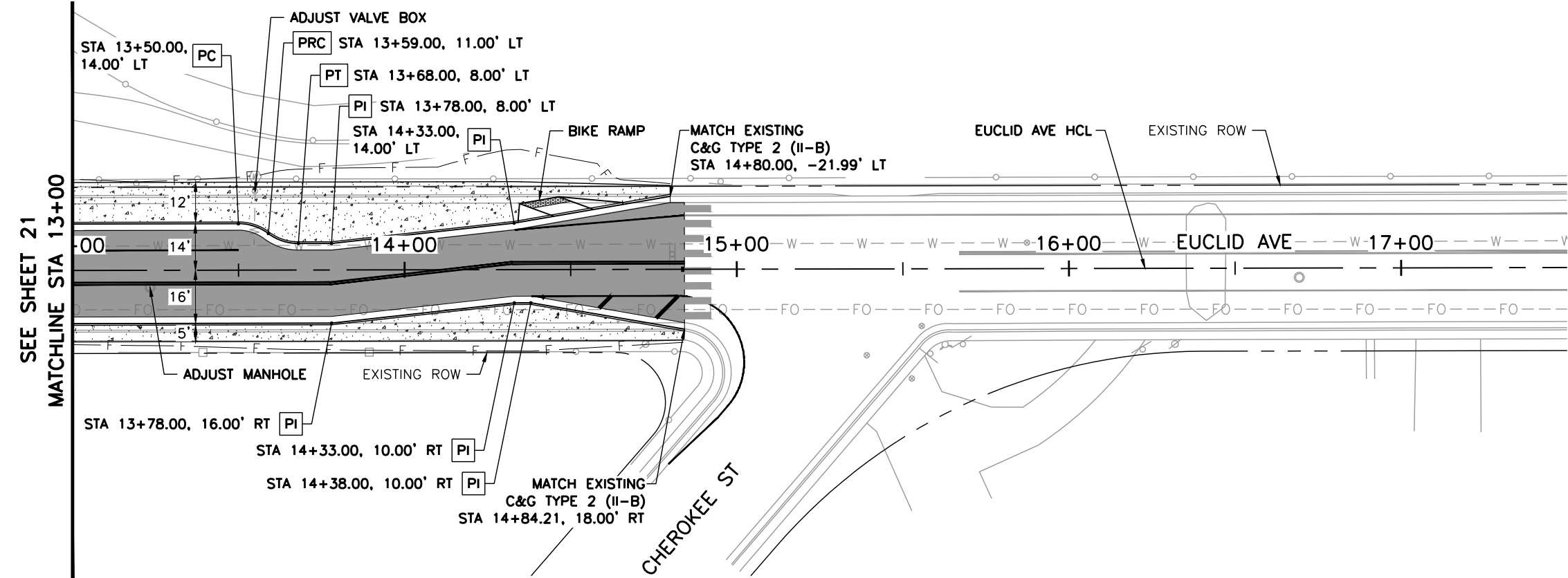
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Designer:	LML	Structure Numbers	
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LEGEND:

- HOT MIX ASPHALT
- CONCRETE PAVEMENT (6 INCH)
- CONCRETE PAVEMENT (10 INCH)
- CONCRETE PAVEMENT (SPECIAL)
- CONCRETE SIDEWALK (6 INCH)

- SC— SAWCUT LIMITS
- F— TOE OF FILL
- C— TOP OF CUT

NOTES:

- ALL STATION, OFFSET CALLOUTS REFERENCE THE EUCLID AVE HCL AND ARE TO THE FLOWLINE.
- ALL RADIAL DIMENSIONS ARE TO THE FLOWLINE.
- LITTLETON PUBLIC SCHOOLS (LPS) IS DESIGNING ON-SITE IMPROVEMENTS (OUTSIDE OF THE RIGHT-OF-WAY) AT EUCLID MIDDLE SCHOOL. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO MATCH ON-SITE, FINISHED GRADE IMPROVEMENTS.
- REFER TO THE ROADWAY DETAIL SHEETS FOR ADDITIONAL INFORMATION NOT PROVIDED ON THE ROADWAY PLAN AND PROFILE SHEETS.

0' 20' 40' 80'
SCALE: 1" = 40'



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File Name: 1525-201872.18-CD-09.1-RDWY PNP-EUCLID.dwg
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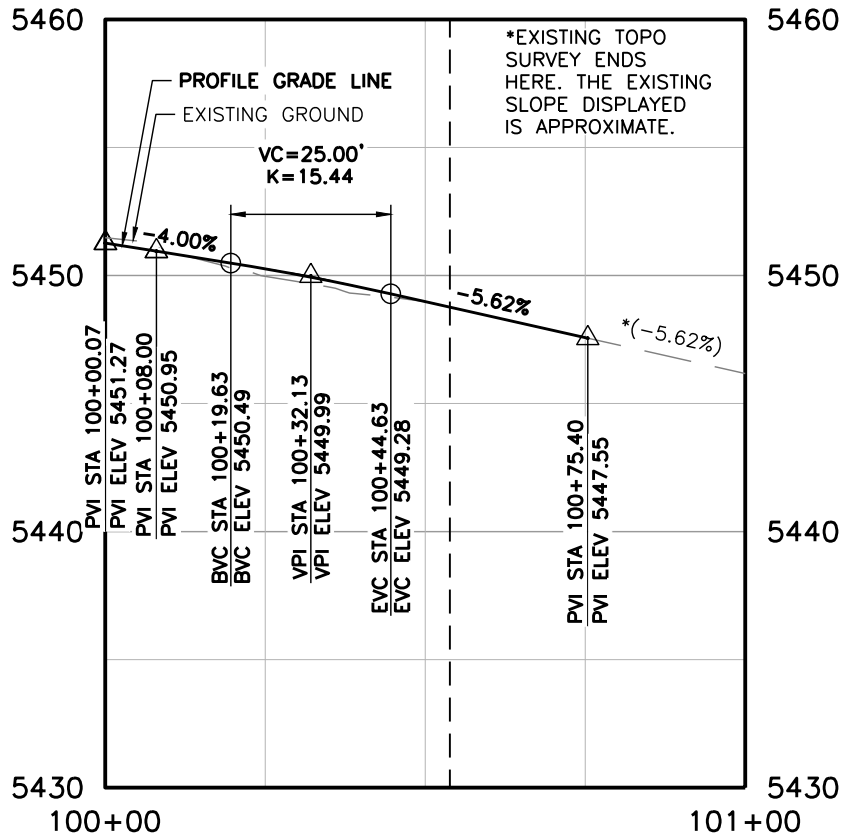
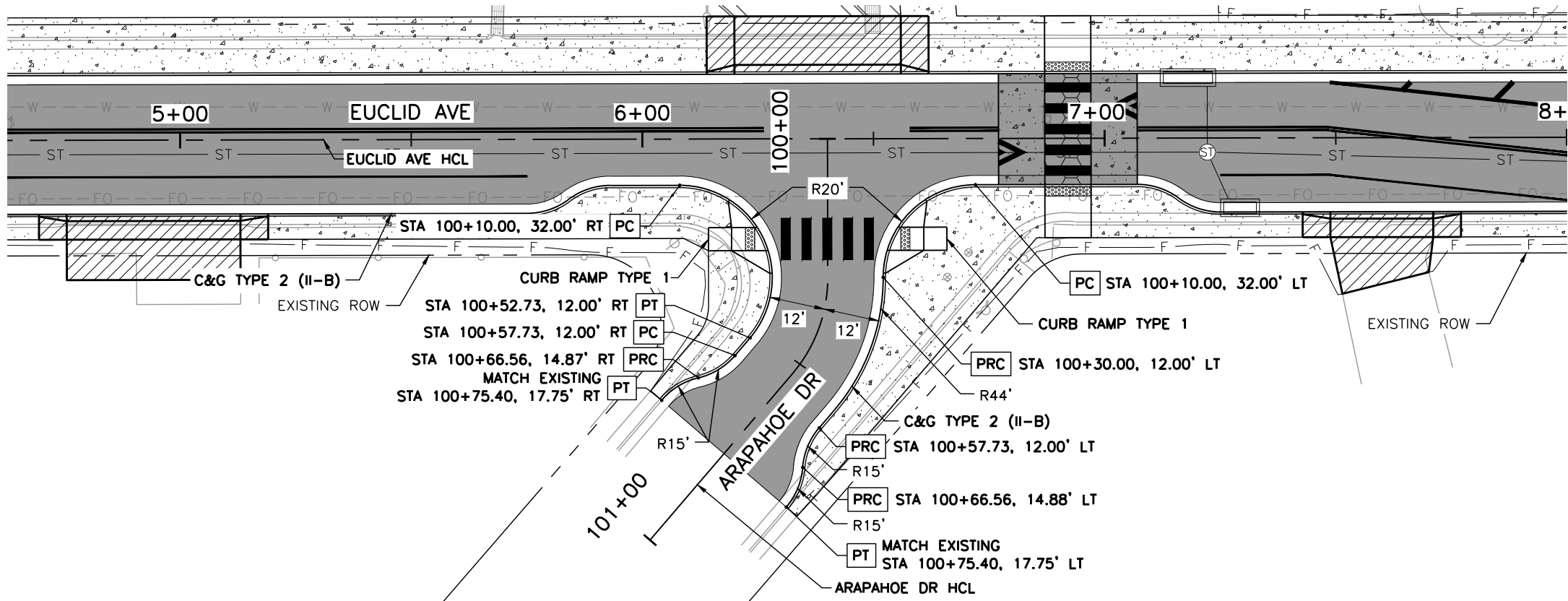
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Detailer:	LML		
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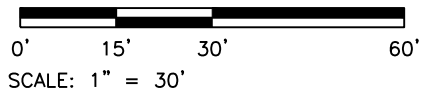
LEGEND:

- HOT MIX ASPHALT
- CONCRETE PAVEMENT (6 INCH)
- CONCRETE PAVEMENT (10 INCH)
- CONCRETE PAVEMENT (SPECIAL)
- CONCRETE SIDEWALK (6 INCH)

- SC— SAWCUT LIMITS
- F— TOE OF FILL
- C— TOP OF CUT

NOTES:

- ALL STATION, OFFSET CALLOUTS REFERENCE THE ARAPAHOE DR HCL AND ARE TO THE FLOWLINE.
- ALL RADIAL DIMENSIONS ARE TO THE FLOWLINE.
- THE PROPOSED TIE-IN LOCATION ON ARAPAHOE DR IS APPROXIMATE. EXISTING TOPOGRAPHIC SURVEY ENDS PRIOR TO THE PROPOSED SAWCUT LINE. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO DETERMINE IF THE TIE-IN LOCATION SHOULD BE MODIFIED.
- THE ARAPAHOE DR PROFILE GRADE LINE SHOWN ON THIS SHEET IS APPROXIMATE. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO DETERMINE IF THE VERTICAL ALIGNMENT SHOULD BE MODIFIED TO HAVE MINIMAL IMPACTS TO ADJACENT PRIVATE PROPERTIES.
- REFER TO THE ROADWAY DETAIL SHEETS FOR ADDITIONAL INFORMATION NOT PROVIDED ON THE ROADWAY PLAN AND PROFILE SHEETS.



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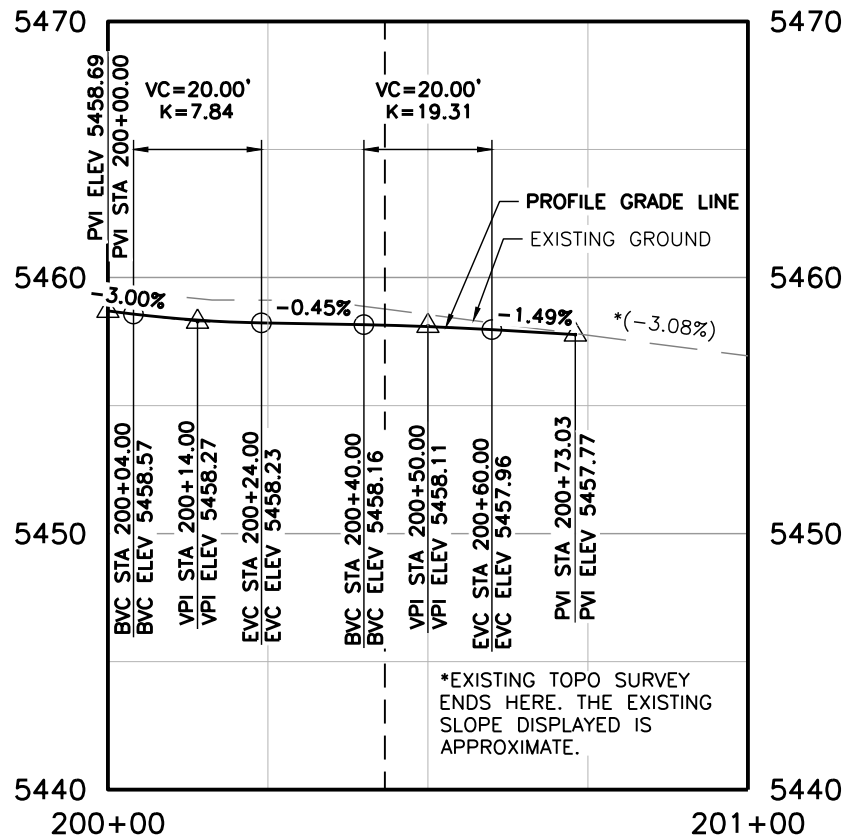
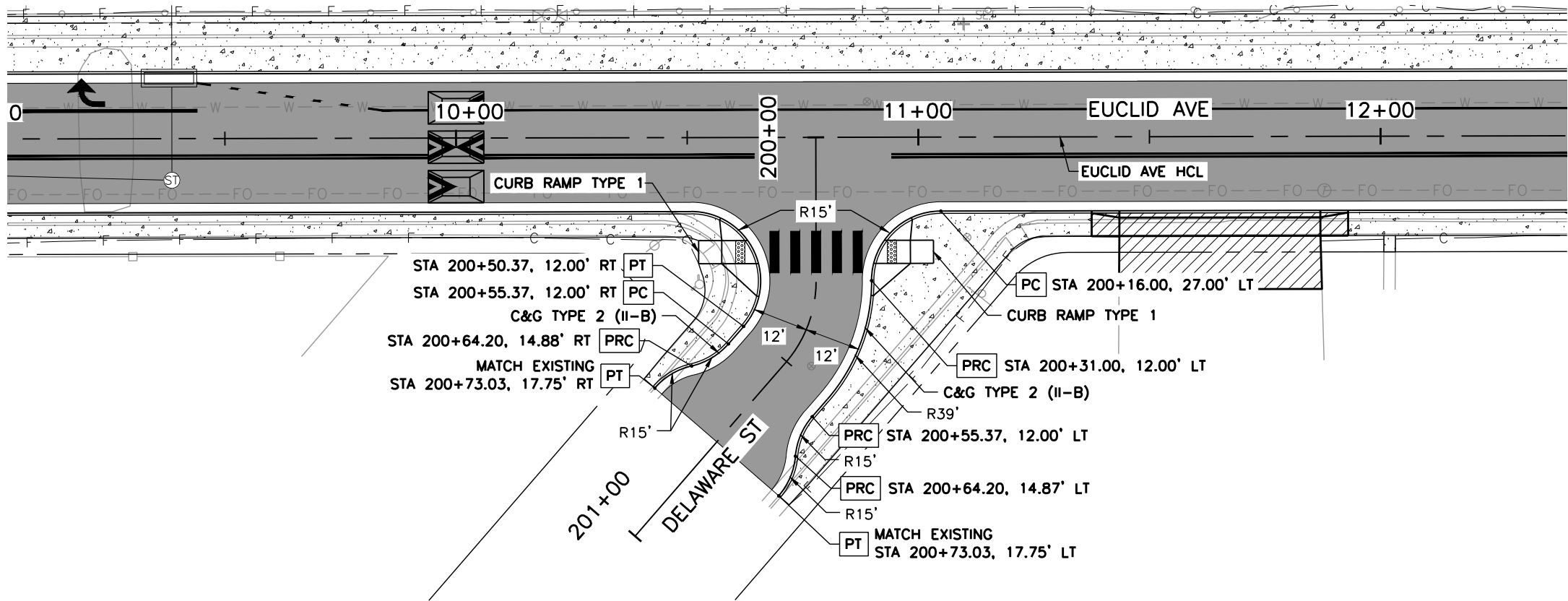
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Designer:	LML	Structure Numbers	
Detailer:	LML		
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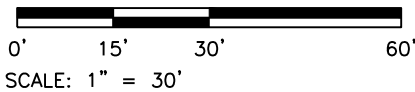
LEGEND:

- HOT MIX ASPHALT
- CONCRETE PAVEMENT (6 INCH)
- CONCRETE PAVEMENT (10 INCH)
- CONCRETE PAVEMENT (SPECIAL)
- CONCRETE SIDEWALK (6 INCH)

- SC— SAWCUT LIMITS
- F— TOE OF FILL
- C— TOP OF CUT

NOTES:

- ALL STATION, OFFSET CALLOUTS REFERENCE THE DELAWARE ST HCL AND ARE TO THE FLOWLINE.
- ALL RADIAL DIMENSIONS ARE TO THE FLOWLINE.
- THE PROPOSED TIE-IN LOCATION ON DELAWARE ST IS APPROXIMATE. EXISTING TOPOGRAPHIC SURVEY ENDS PRIOR TO THE PROPOSED SAWCUT LINE. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO DETERMINE IF THE TIE-IN LOCATION SHOULD BE MODIFIED.
- THE DELAWARE ST PROFILE GRADE LINE SHOWN ON THIS SHEET IS APPROXIMATE. ADJUSTMENTS IN THE FIELD MAY BE NEEDED TO DETERMINE IF THE VERTICAL ALIGNMENT SHOULD BE MODIFIED TO HAVE MINIMAL IMPACTS TO ADJACENT PRIVATE PROPERTIES.
- SLOPE LABELS IN PARENTHESIS REFER TO EXISTING CONDITIONS.
- REFER TO THE ROADWAY DETAIL SHEETS FOR ADDITIONAL INFORMATION NOT PROVIDED ON THE ROADWAY PLAN AND PROFILE SHEETS.



SCALE: 1" = 30'



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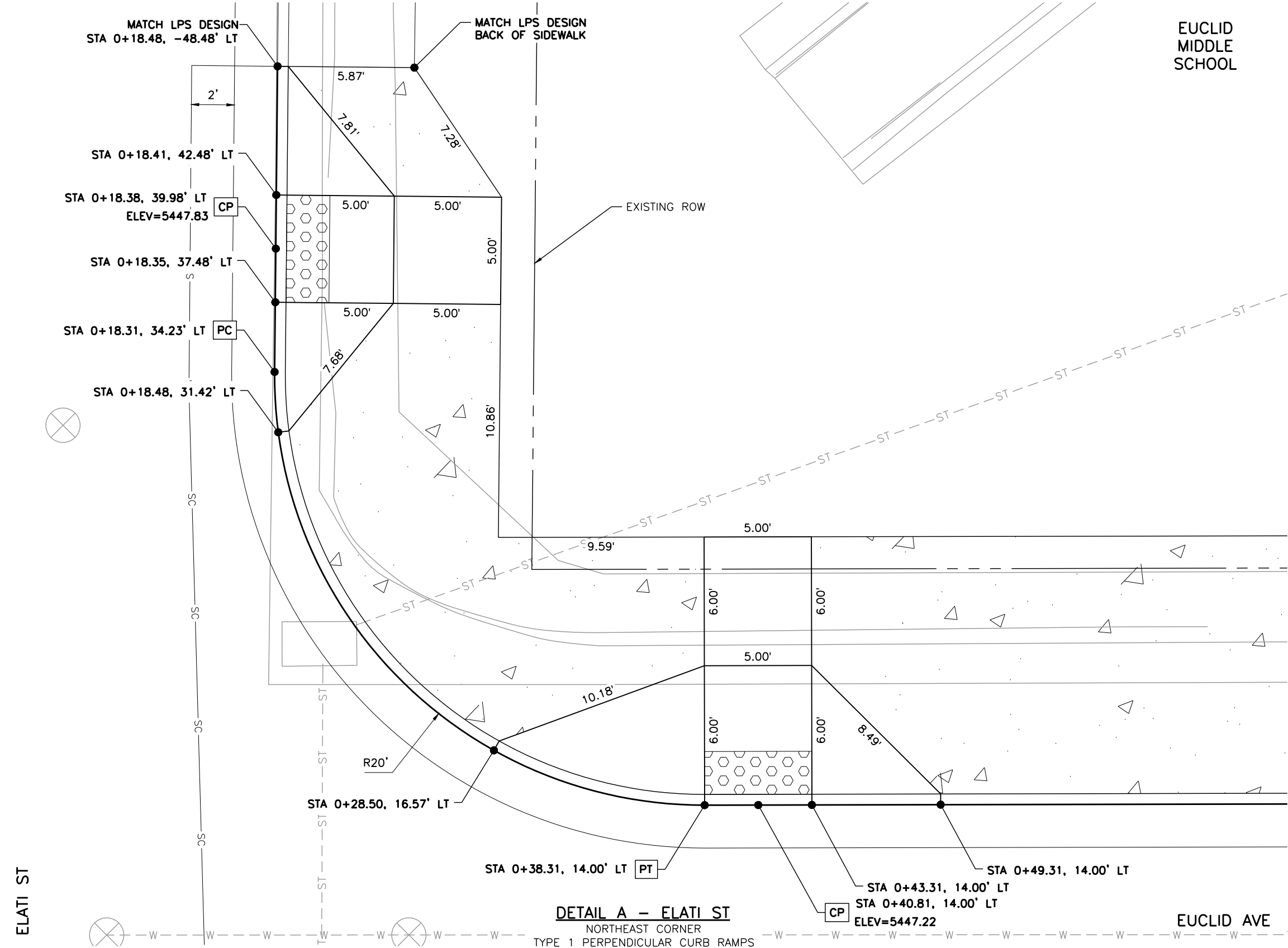
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No. Revisions:
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Detailer:	LML		
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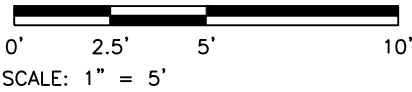
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5. LINE AND CURVE DIMENSIONS FOR CURB RAMP DETAILS AND DRIVEWAY DETAILS ARE PROVIDED FOR REFERENCE.
6. CURB RAMP CONSTRUCTION SHALL CONFORM TO THE GRADE, WIDTH, AND LENGTH REQUIREMENTS SHOWN IN CDOT STD PLAN NO. M-608-1. WHERE FIELD CONDITIONS PREVENT A FULLY COMPLIANT FACILITY, THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO VERIFY THE FIELD CONSTRAINTS, DOCUMENT THAT THE FACILITY WILL BE BUILT TO BE COMPLIANT TO THE MAXIMUM EXTENT FEASIBLE, AND DOCUMENT AN EXCEPTION TO BE FILED WITH THE CITY.
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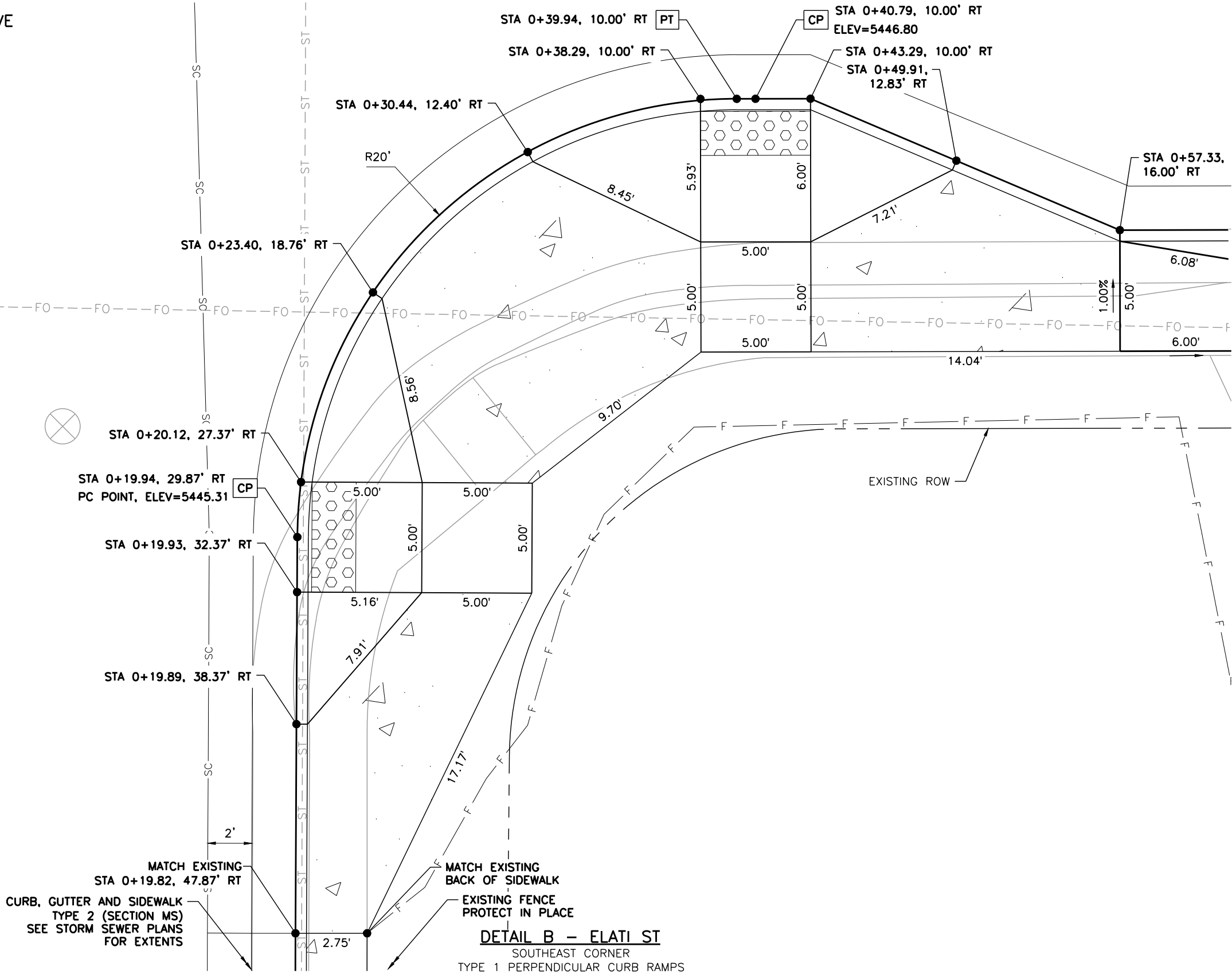
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EUCLID AVE



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SCALE: 1" = 5'



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ROADWAY DETAILS

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Detailer: LML

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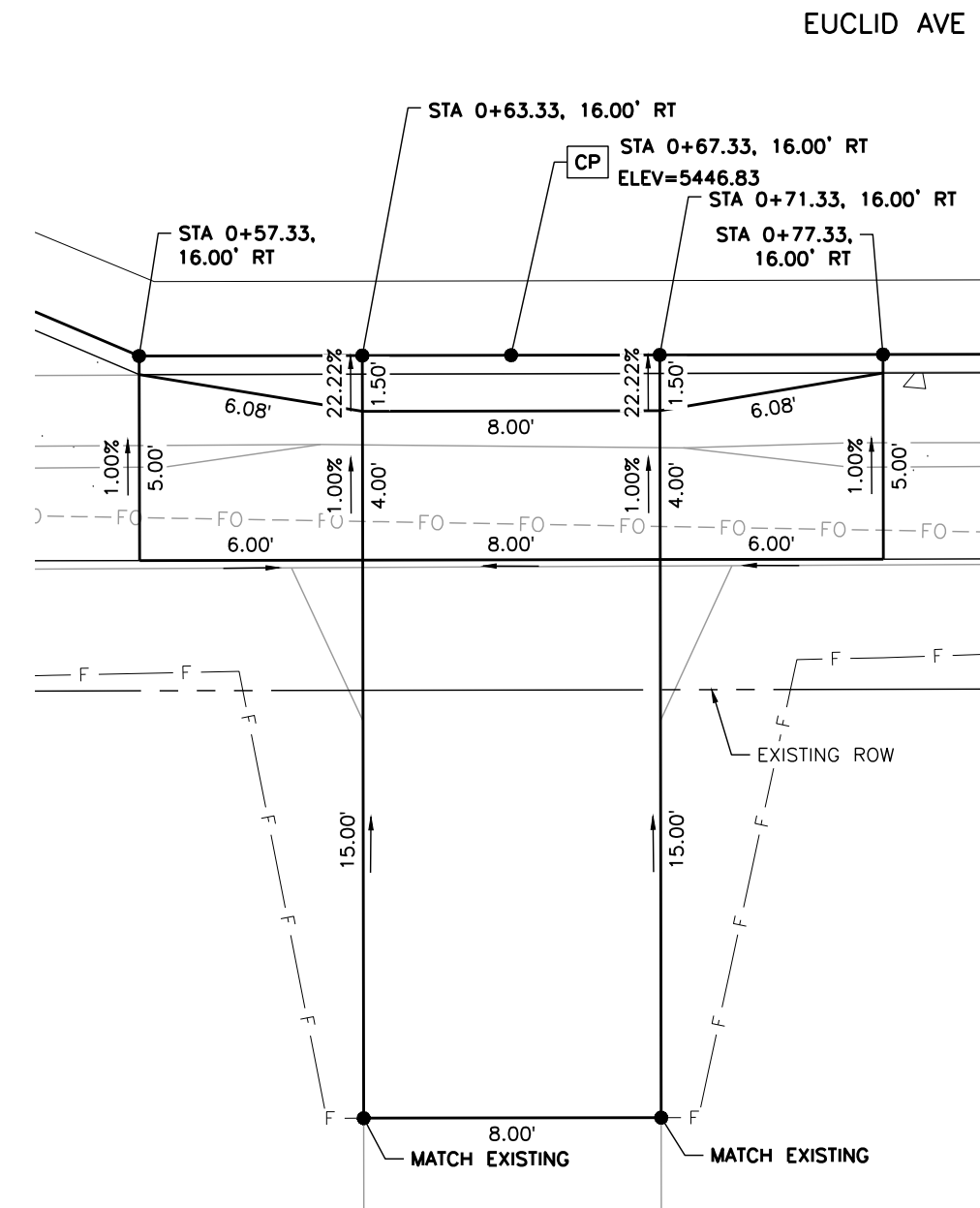
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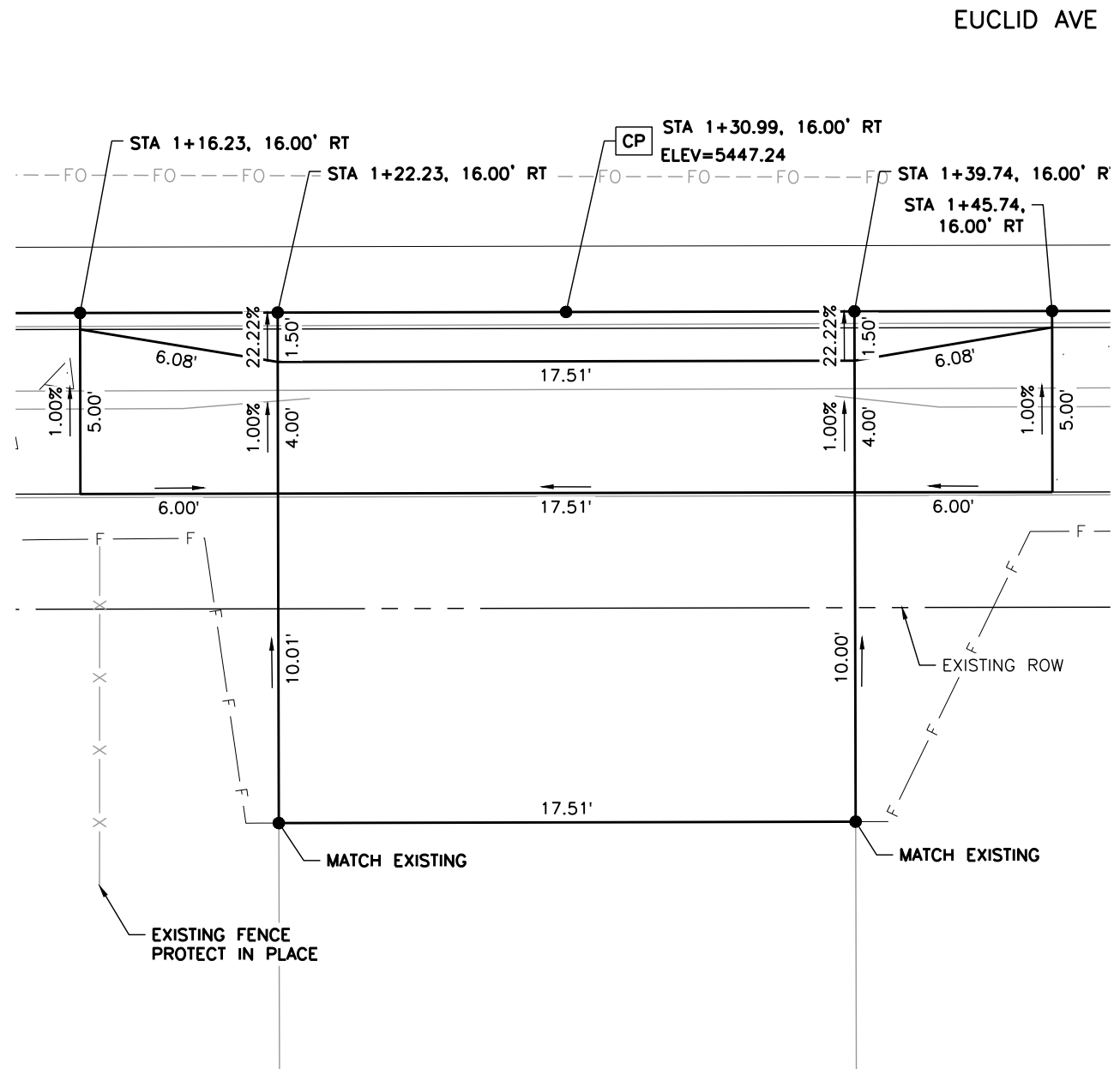
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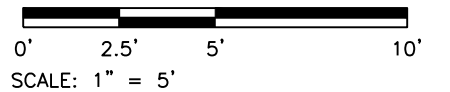
DETAIL C - DRIVEWAY
792 W EUCLID AVE




DETAIL D - DRIVEWAY
782 W EUCLID AVE

NOTES:

1. ALL STATION, OFFSET CALLOUTS REFERENCE THE EUCLID AVE HCL AND ARE TO THE FLOWLINE.
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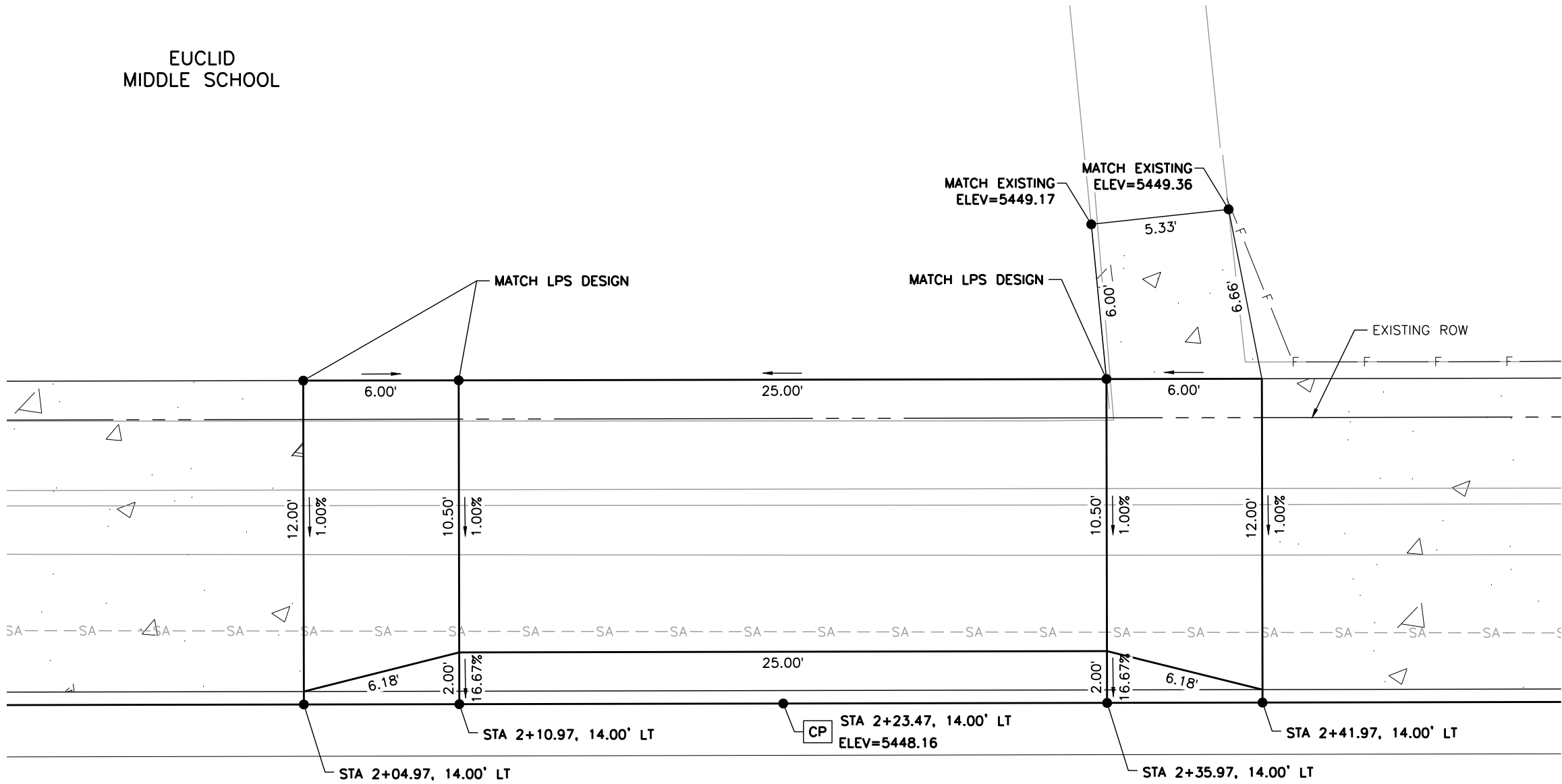

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EUCLID
MIDDLE SCHOOL

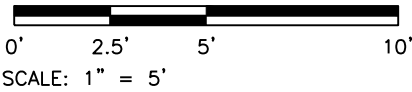


EUCLID AVE

DETAIL E - DRIVEWAY
EUCLID MIDDLE SCHOOL PARKING LOT ENTRANCE

NOTES:

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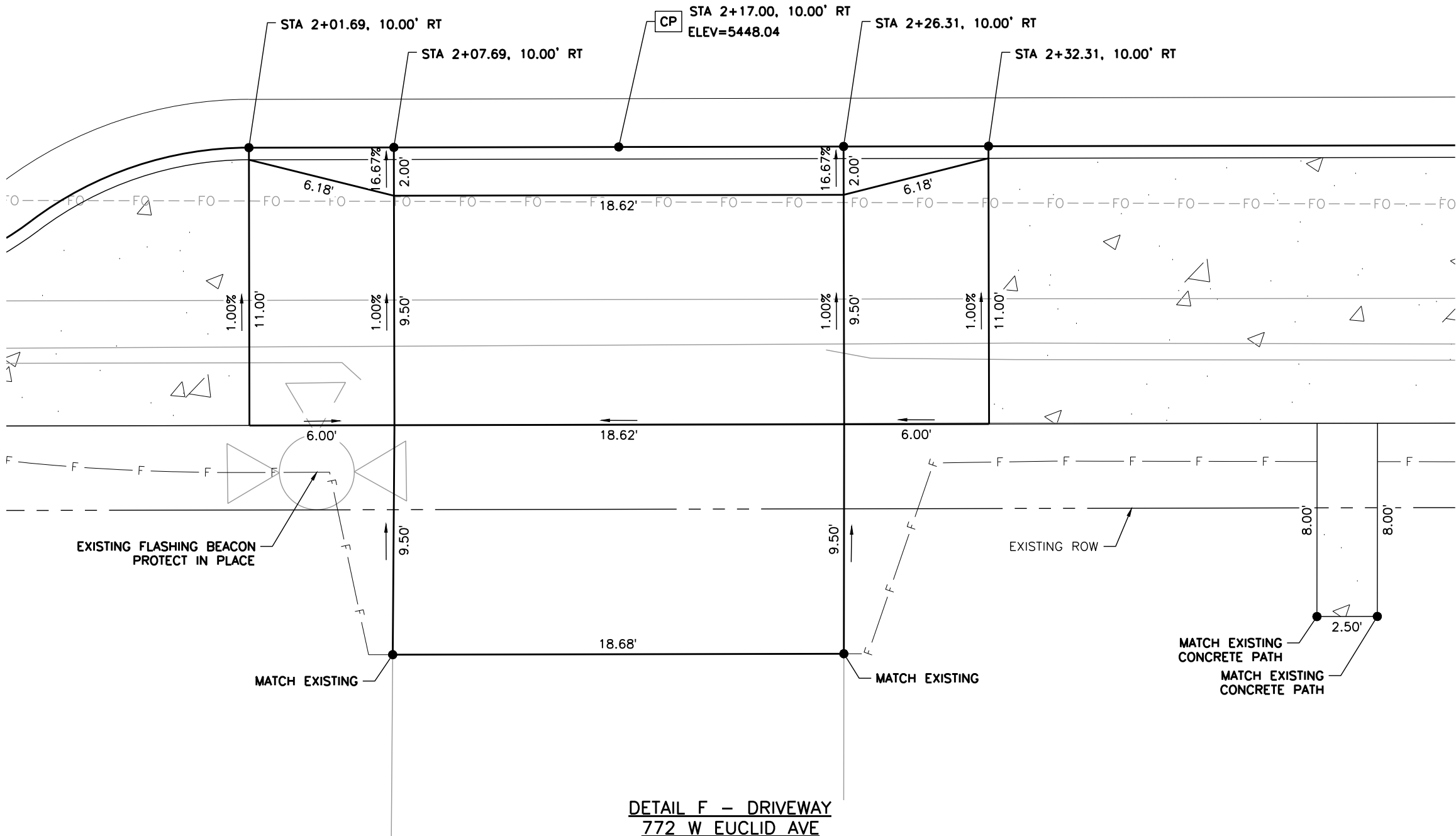
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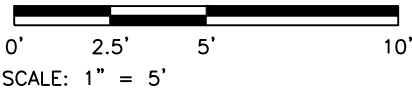
EUCLID AVE



DETAIL F - DRIVEWAY
772 W EUCLID AVE

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Detailer: LML

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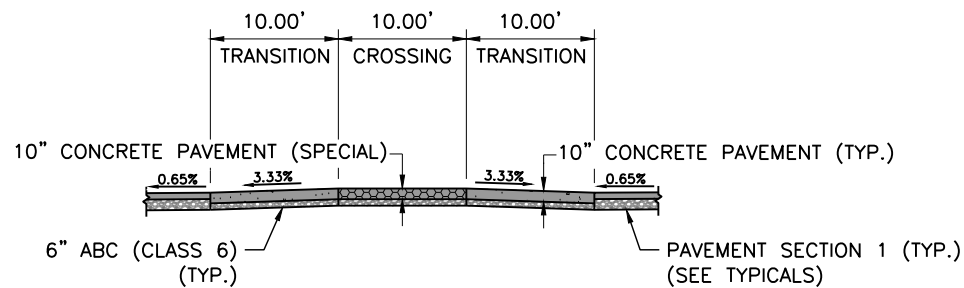
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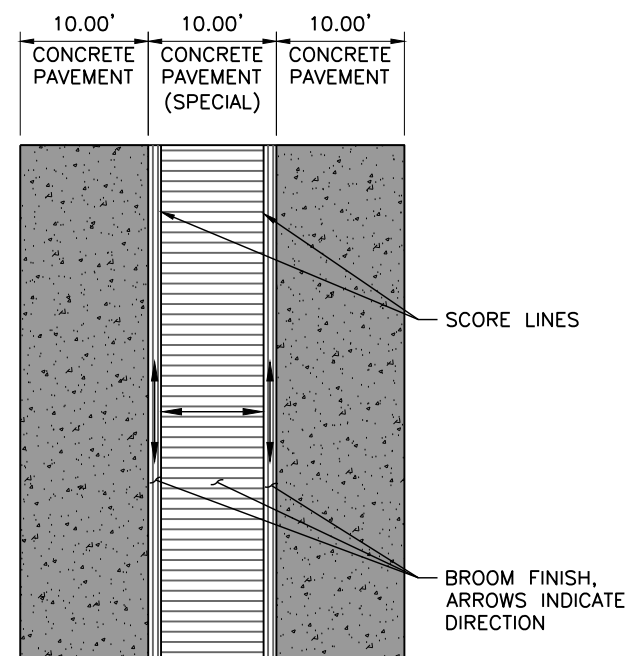
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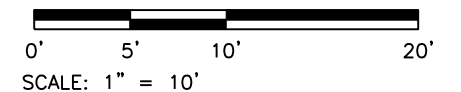


SECTION A-A
RAISED CROSSWALK TYPICAL
NOT TO SCALE



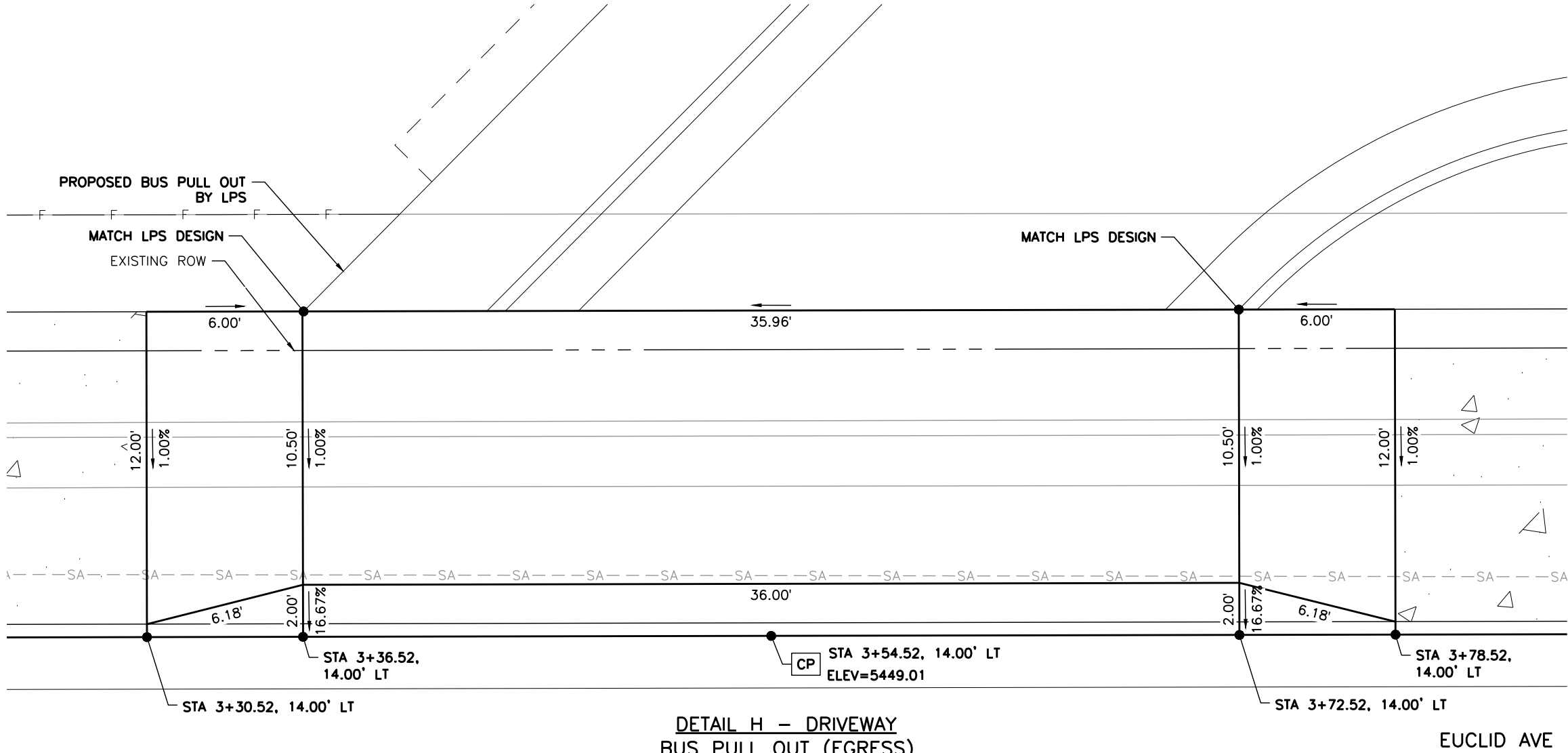
RAISED CROSSWALK
FINISHING DETAIL
NOT TO SCALE

- NOTES:**
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 8. CONCRETE PAVEMENT (SPECIAL) SHALL INCLUDE AN INTEGRAL COLOR ADMIXTURE, FEDERAL COLOR 20109 "RED BROWN".



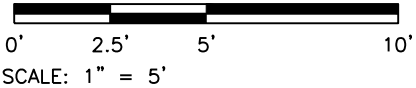
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Revised:	Designer: LML	Structure		
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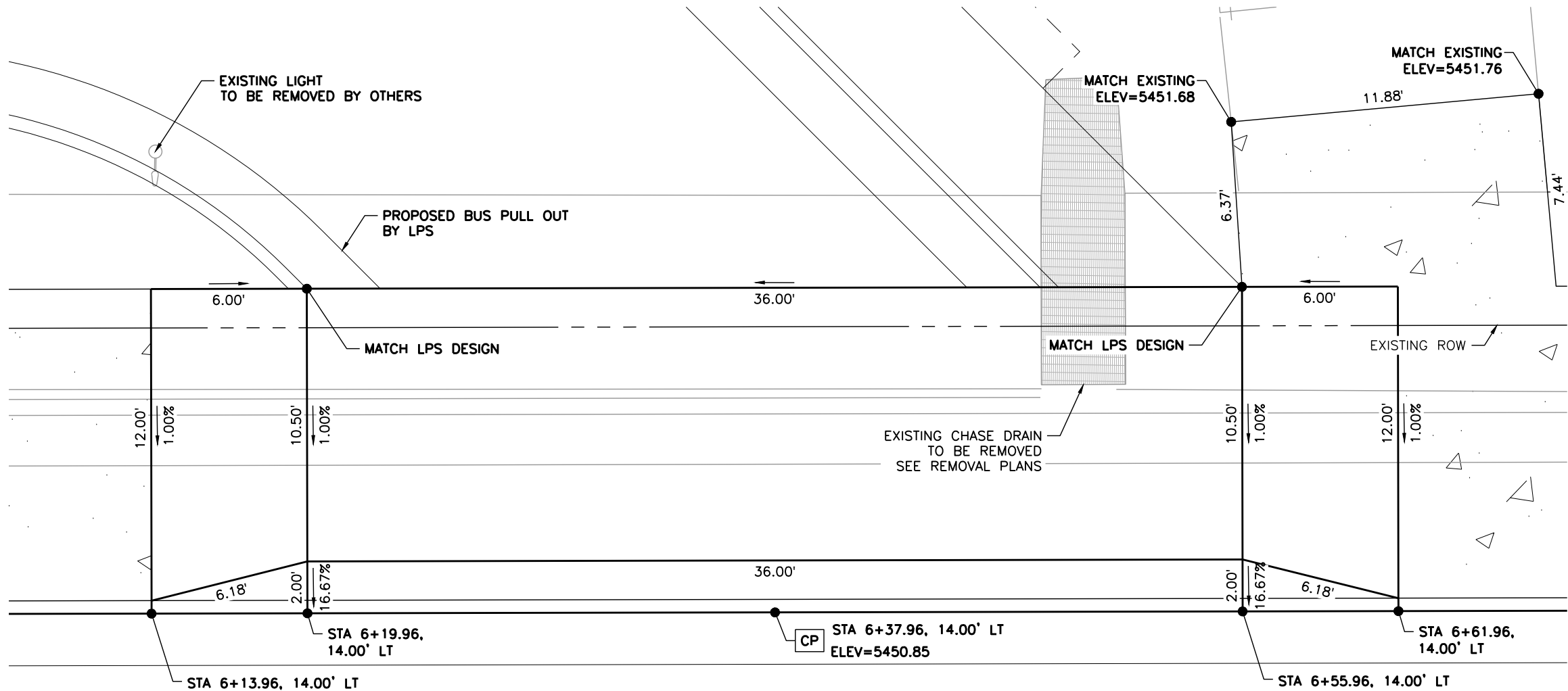
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No. Revisions:
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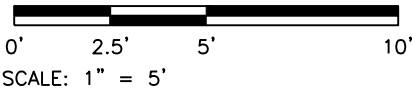


DETAIL I - DRIVEWAY
BUS PULL OUT (INGRESS)

EUCLID AVE

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Sheet Revisions

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ROADWAY DETAILS

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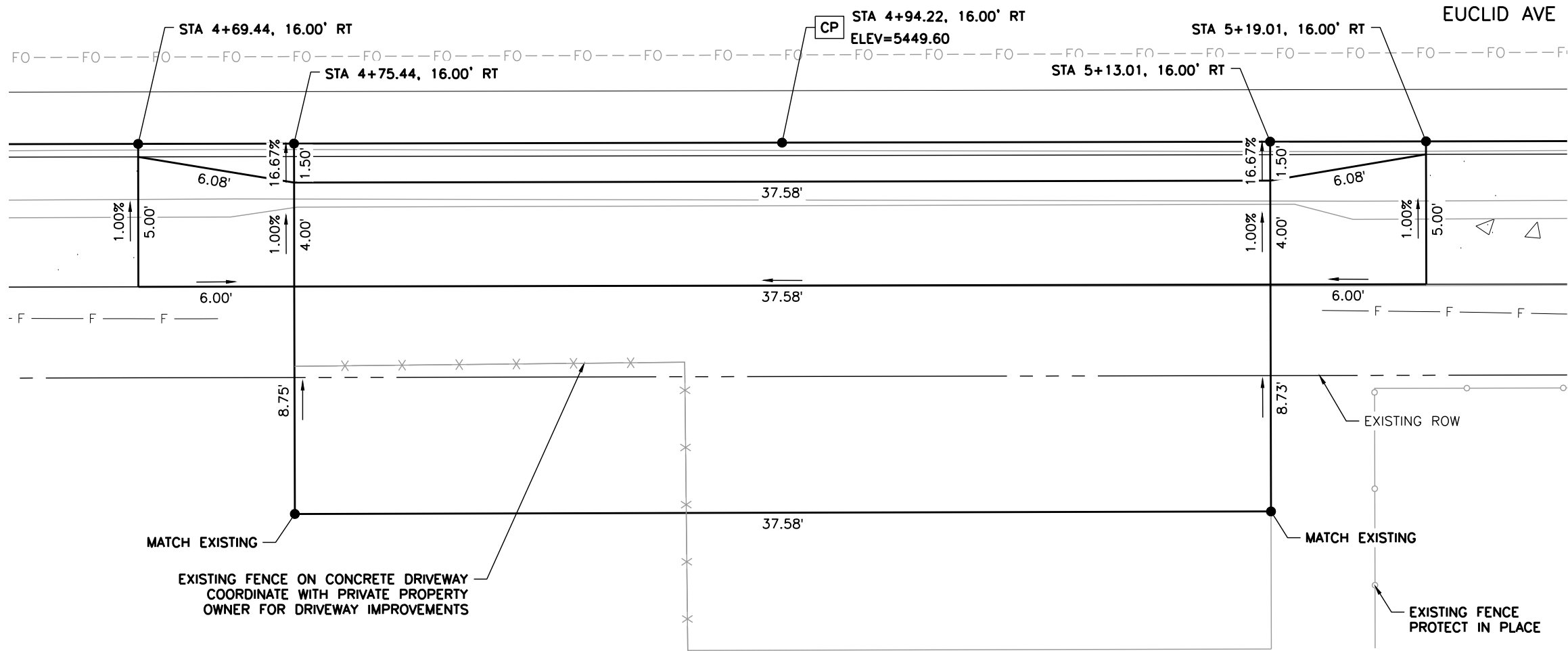
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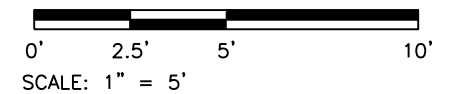
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DETAIL J - DRIVEWAY
6617 S ARAPAHOE DR

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Contract ID 3194	

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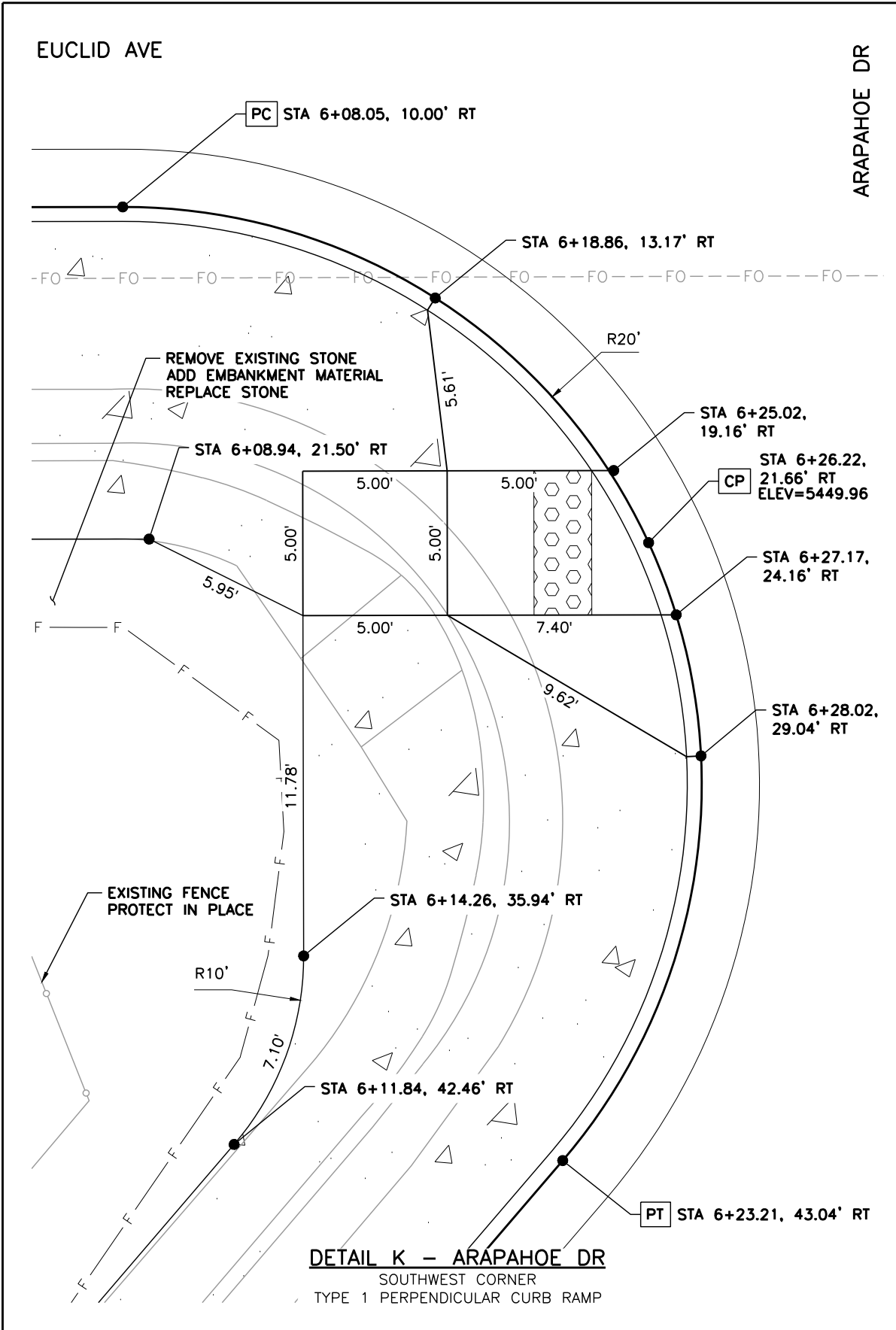
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Date:	Comments	Initials


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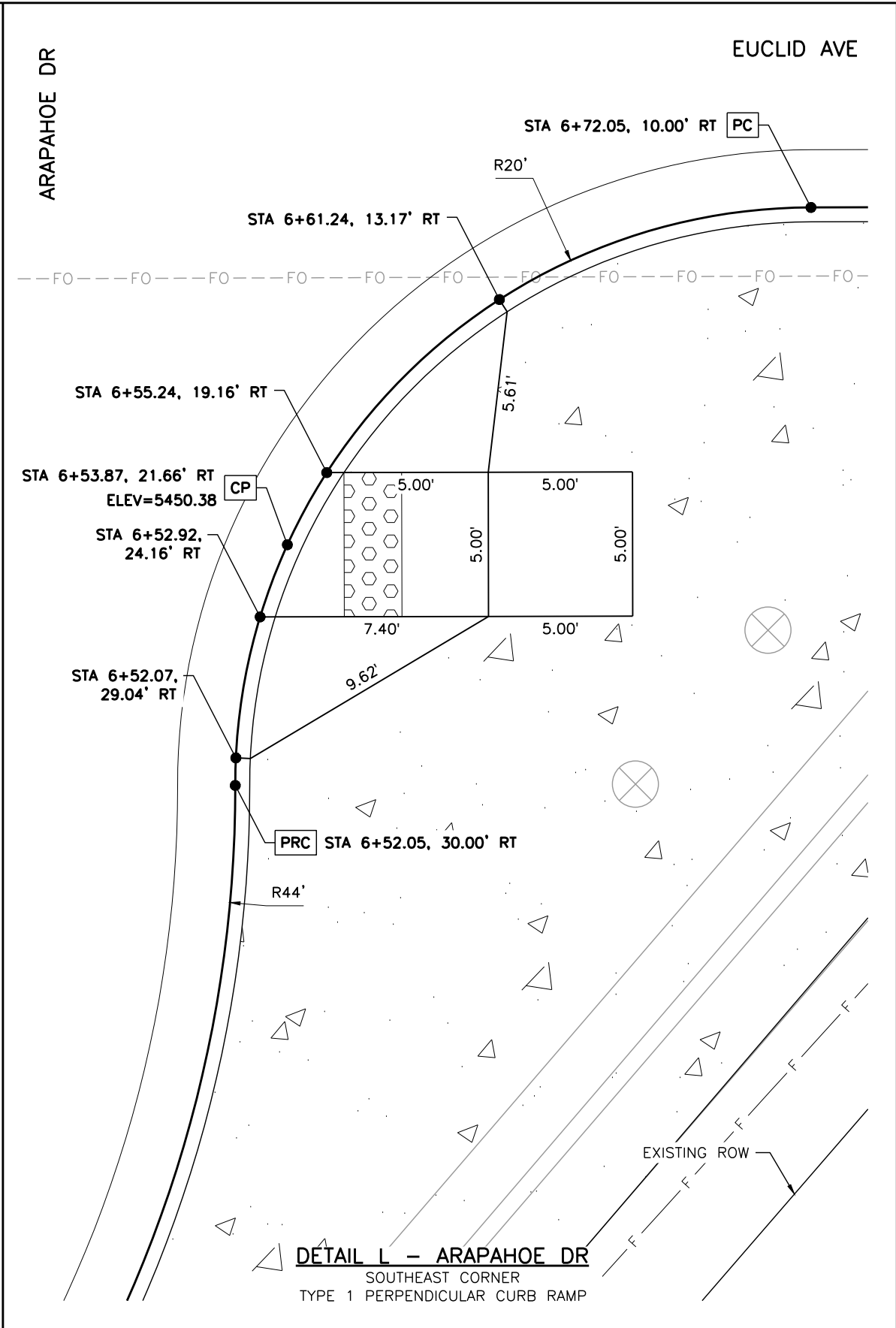
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Void:		Detailer: LML		
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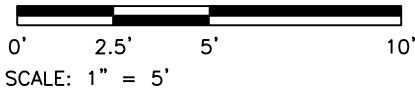
DETAIL K - ARAPAHOE DR
SOUTHWEST CORNER
TYPE 1 PERPENDICULAR CURB RAMP



DETAIL L - ARAPAHOE DR
SOUTHEAST CORNER
TYPE 1 PERPENDICULAR CURB RAMP

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DETAIL M - RAISED CROSSWALK
EAST OF ARAPAHOE DR

RAISED CROSSWALK
FINISHING DETAIL
NOT TO SCALE

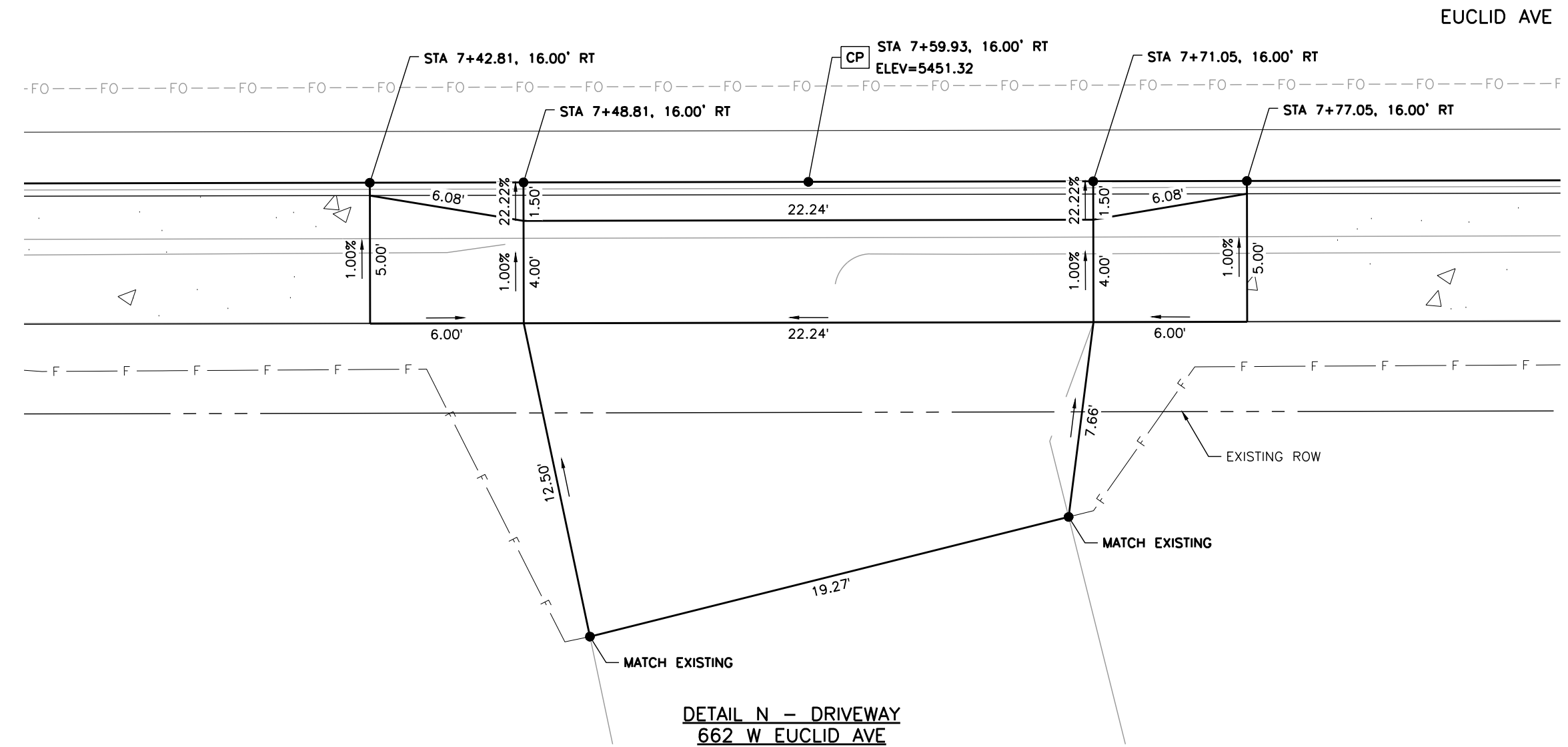
SECTION A-A
RAISED CROSSWALK TYPICAL
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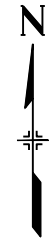
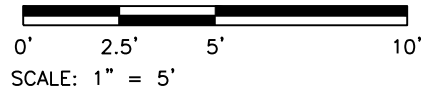


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- NOTES:**
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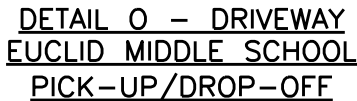
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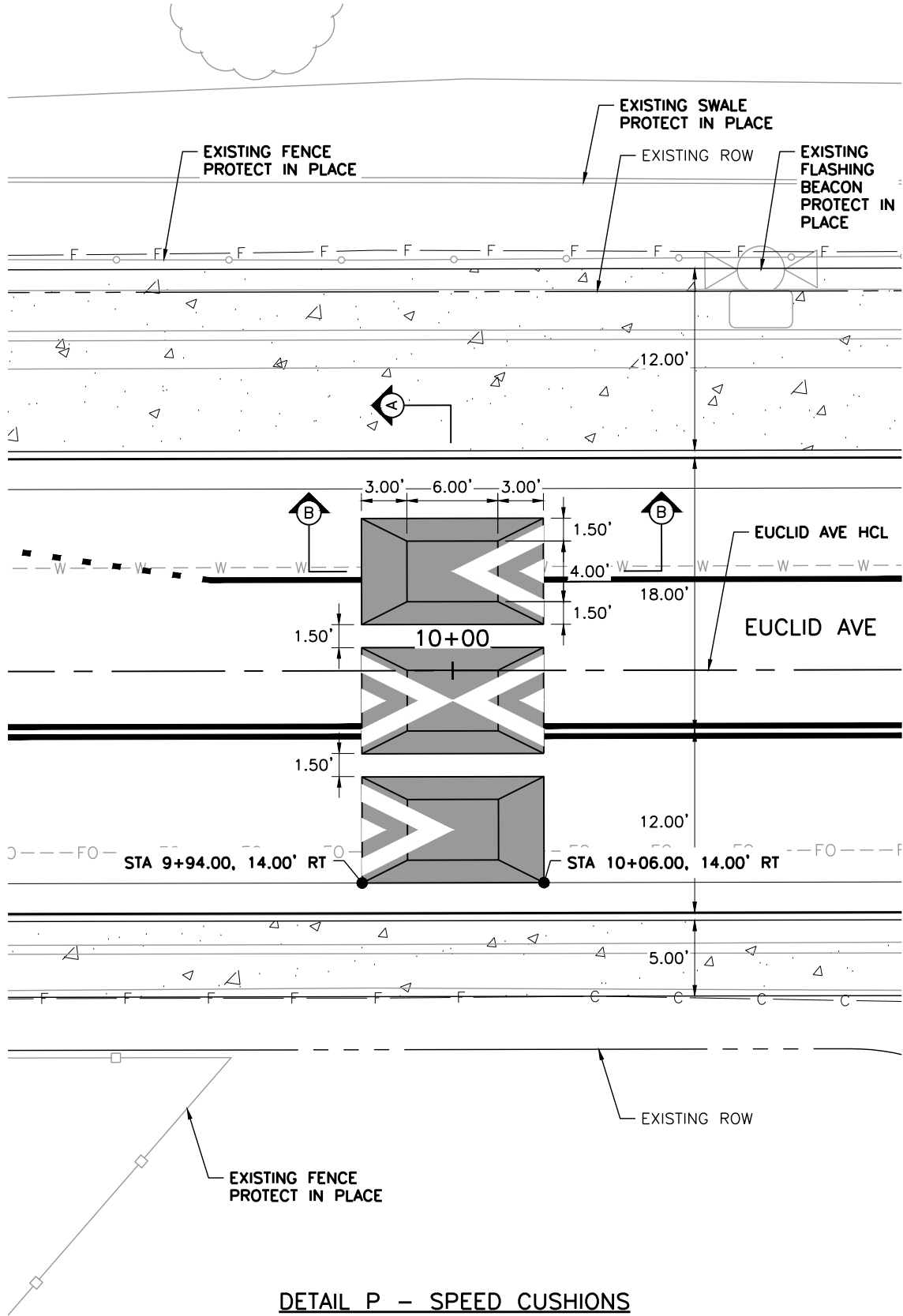


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- SCALE: 1" = 5'

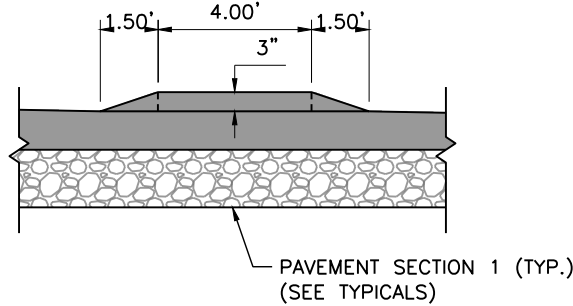


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Contract ID 3194						Sheet Subset:	RDWT DTLS	Subset Sheets:	13 OF 17	Sheet Number: 37 OF 60

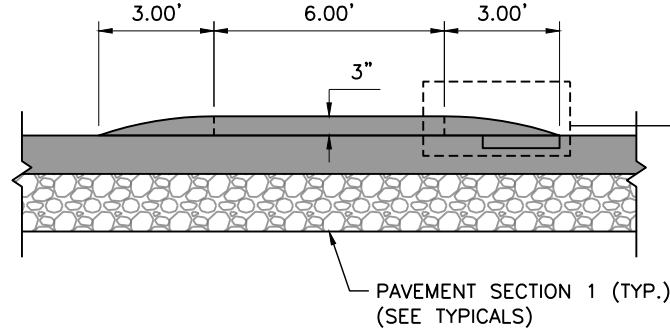
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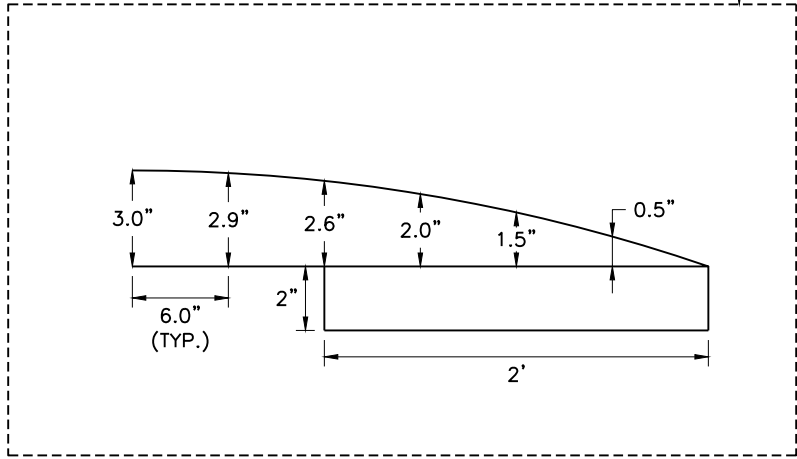
DETAIL P - SPEED CUSHIONS
WEST OF DELAWARE ST



SECTION A-A
NOT TO SCALE

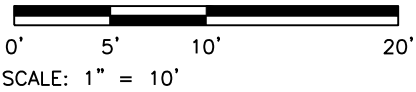


SECTION B-B
NOT TO SCALE



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8. CONCRETE PAVEMENT (SPECIAL) SHALL INCLUDE AN INTEGRAL COLOR ADMIXTURE, FEDERAL COLOR 20109 "RED BROWN".



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Designer: LML

Detailer: LML

Sheet Subset: RDWY DTLs

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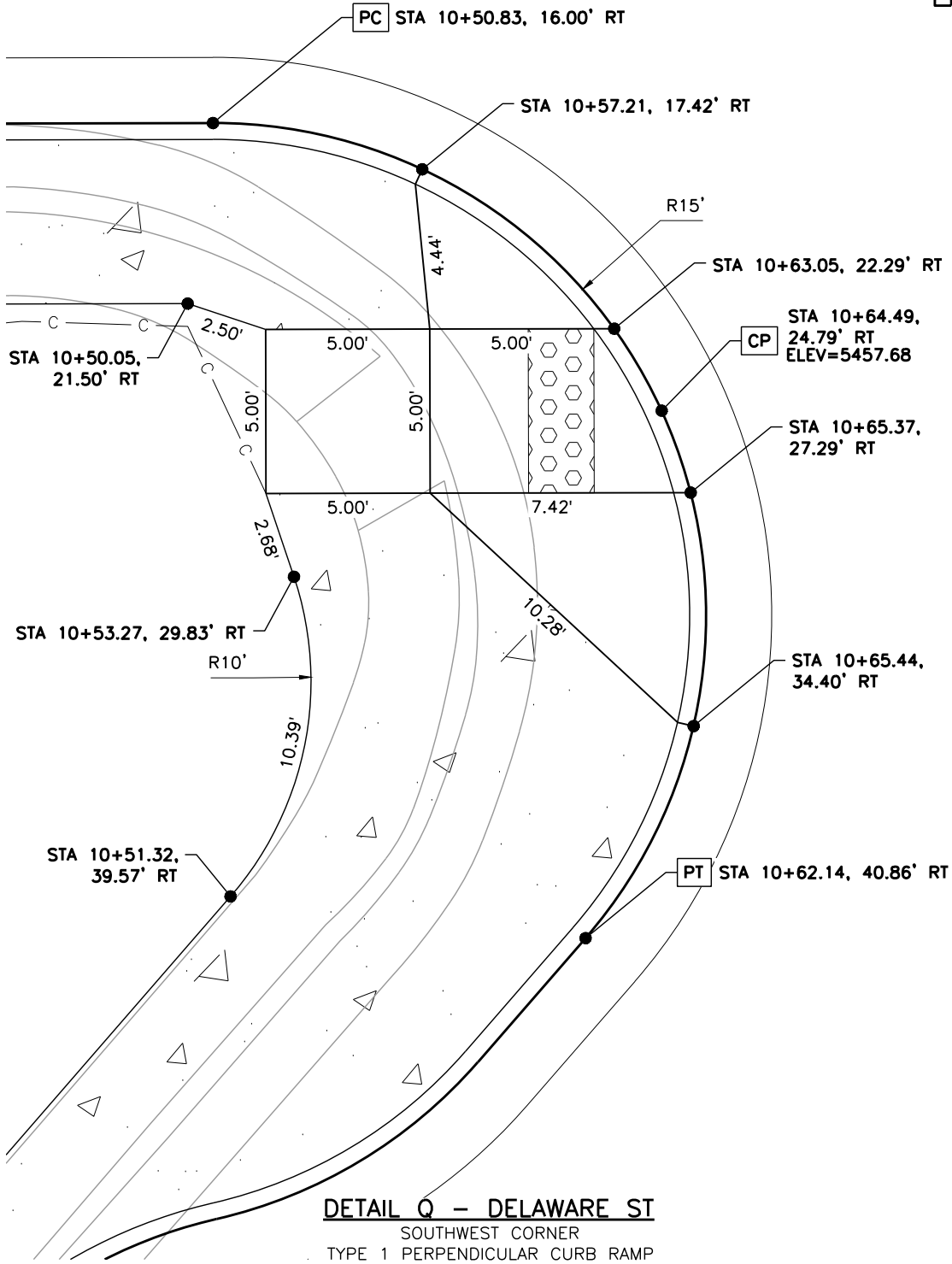
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EUCLID AVE

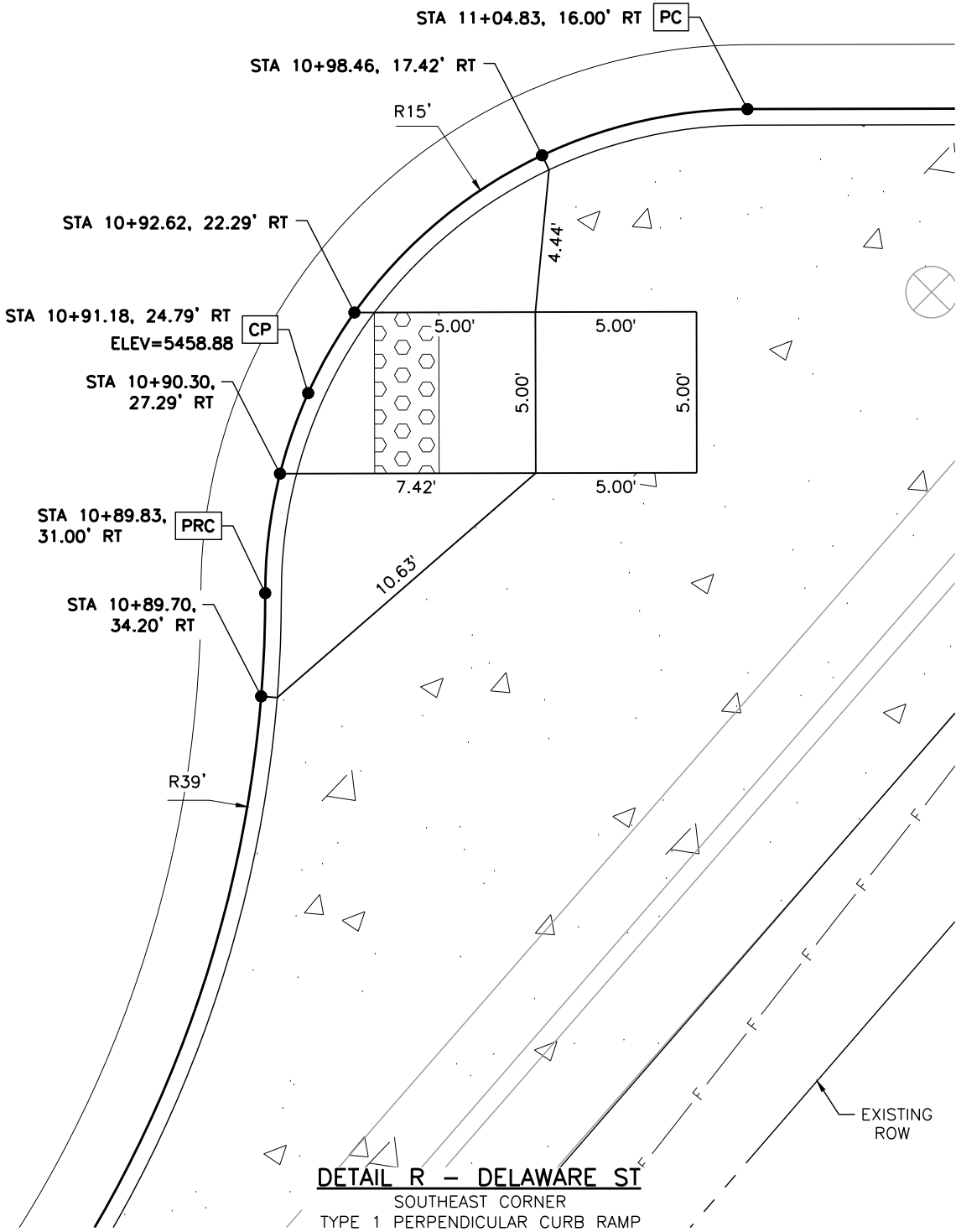
DELAWARE ST



DETAIL Q - DELAWARE ST
SOUTHWEST CORNER
TYPE 1 PERPENDICULAR CURB RAMP

DELAWARE ST

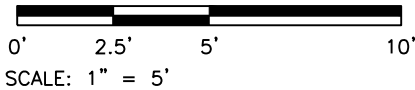
EUCLID AVE



DETAIL R - DELAWARE ST
SOUTHEAST CORNER
TYPE 1 PERPENDICULAR CURB RAMP

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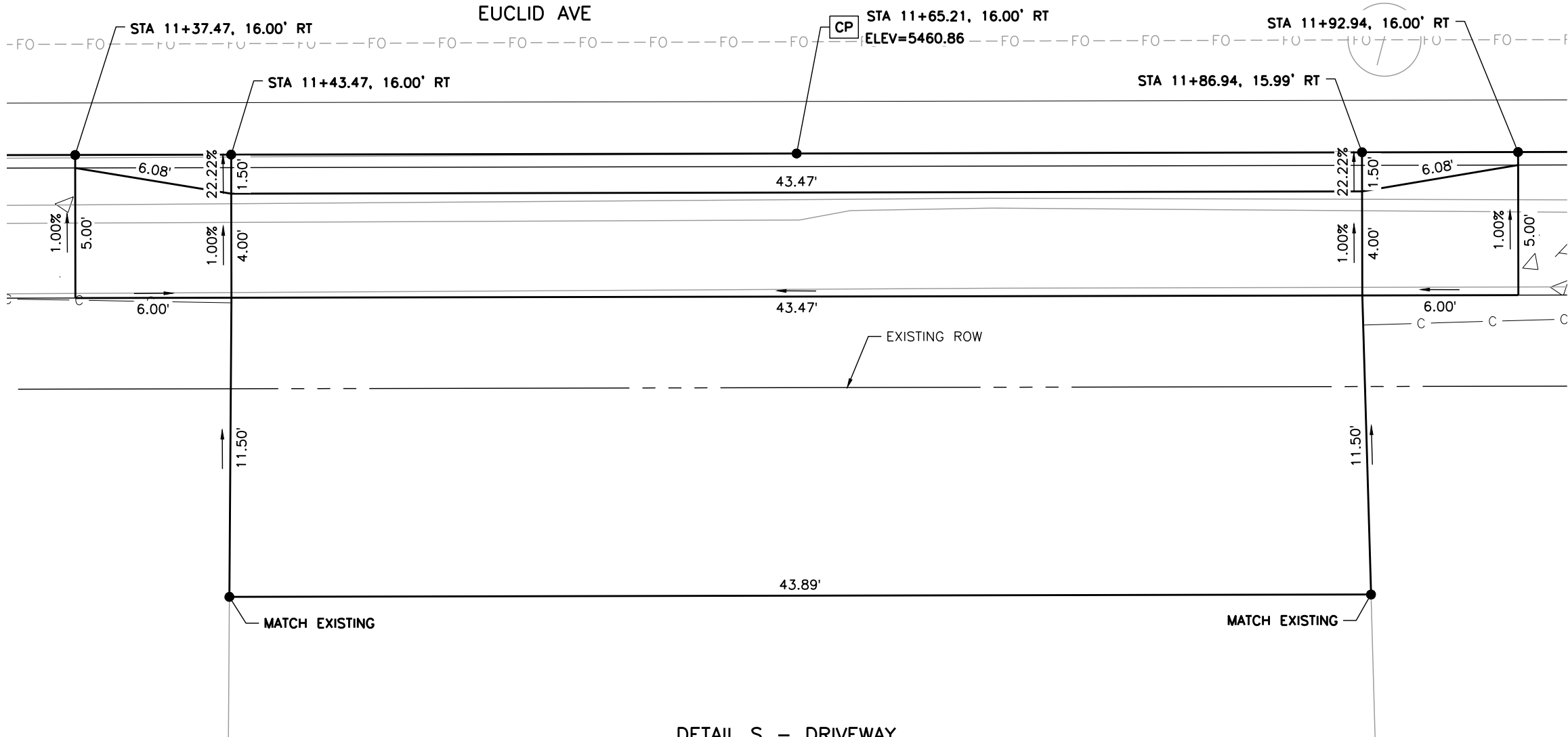
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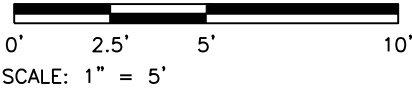
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DETAIL S - DRIVEWAY
432 W EUCLID AVE

NOTES:

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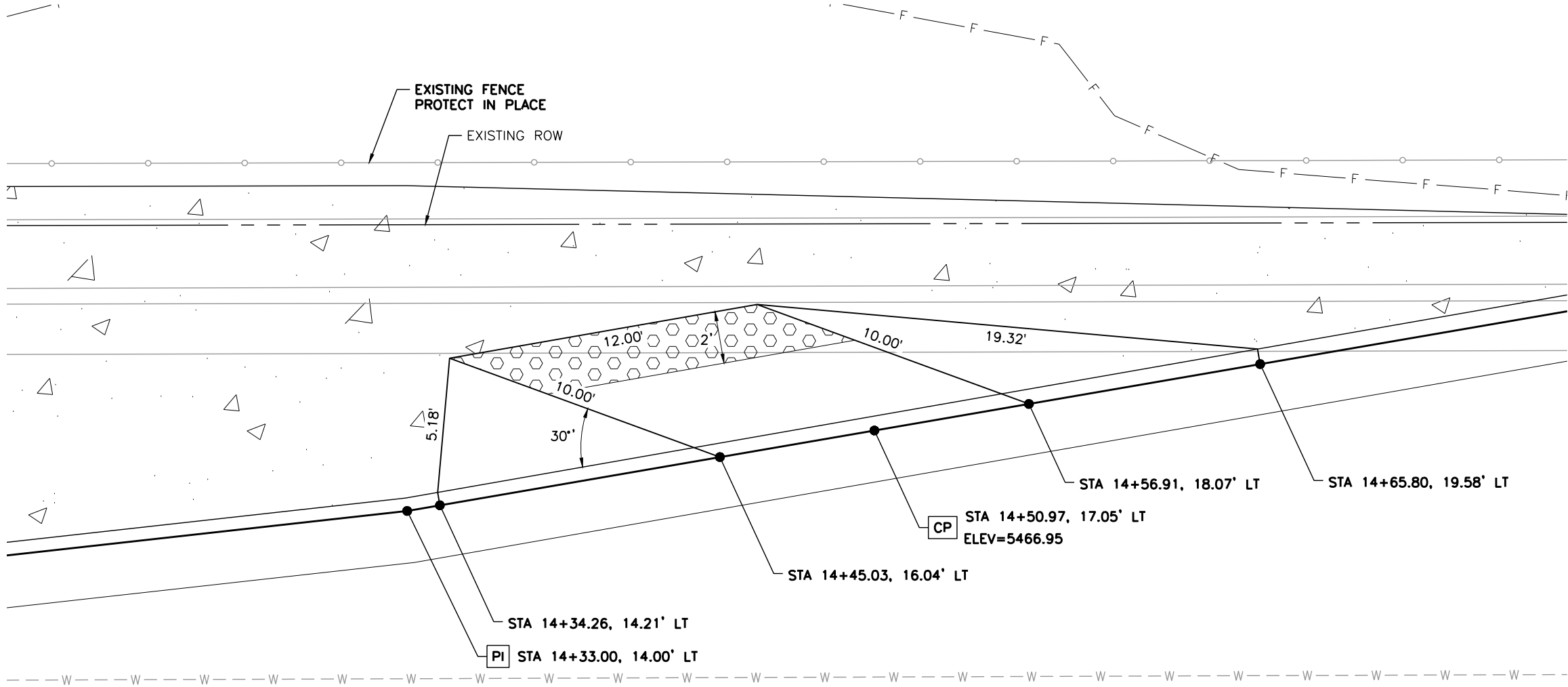

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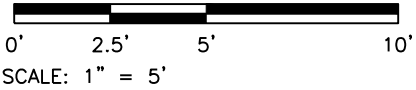
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DETAIL T - BIKE RAMP
WEST OF CHEROKEE ST

NOTES:


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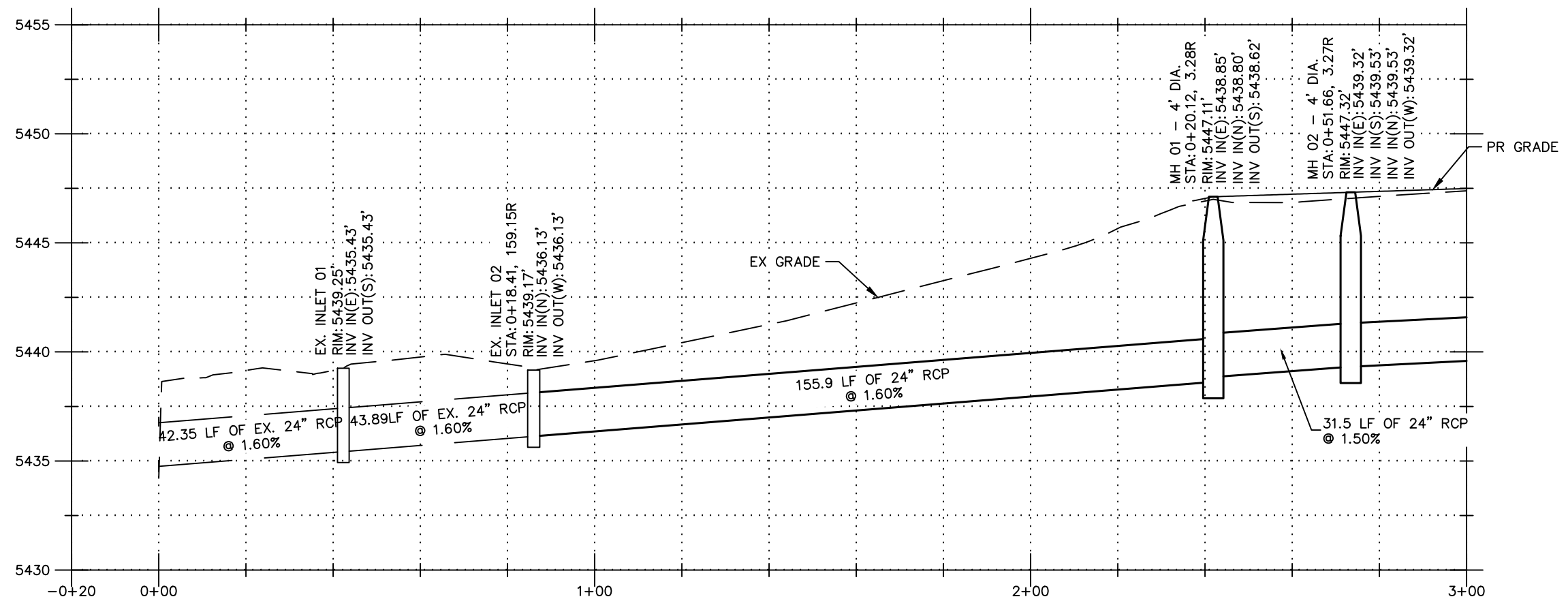
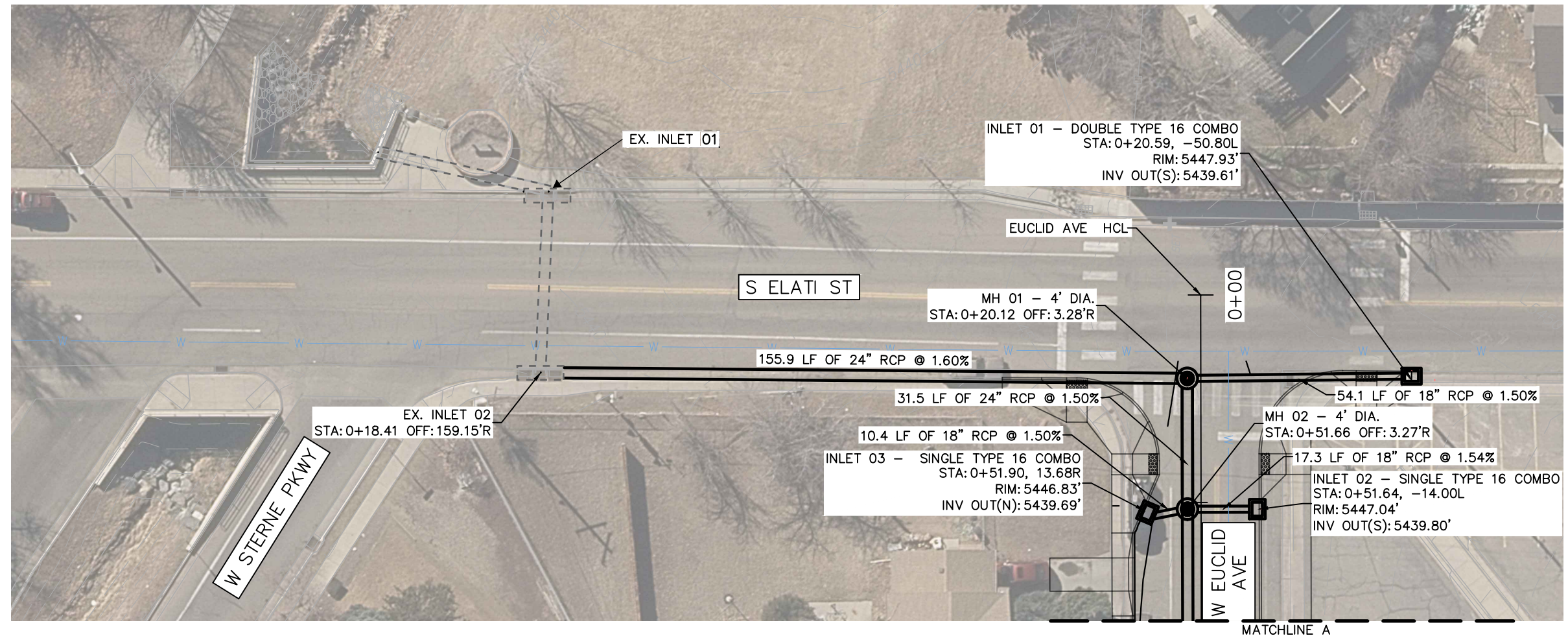
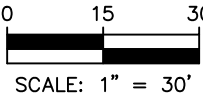
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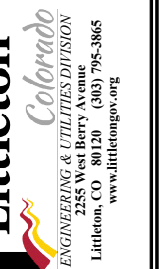
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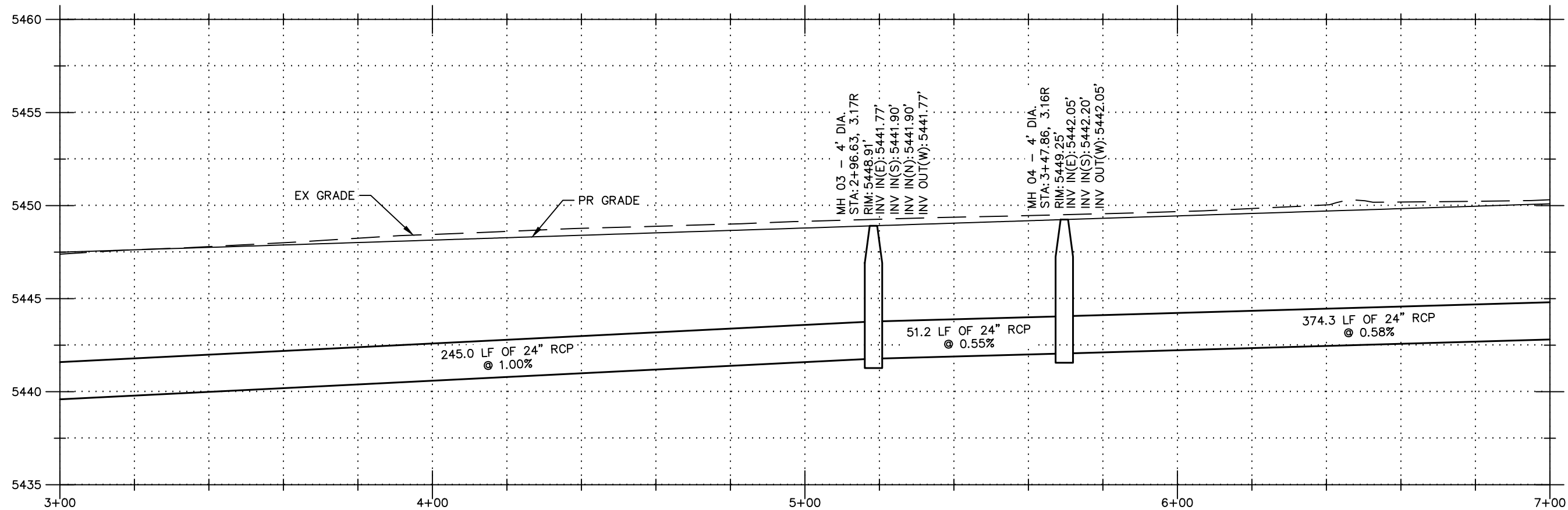
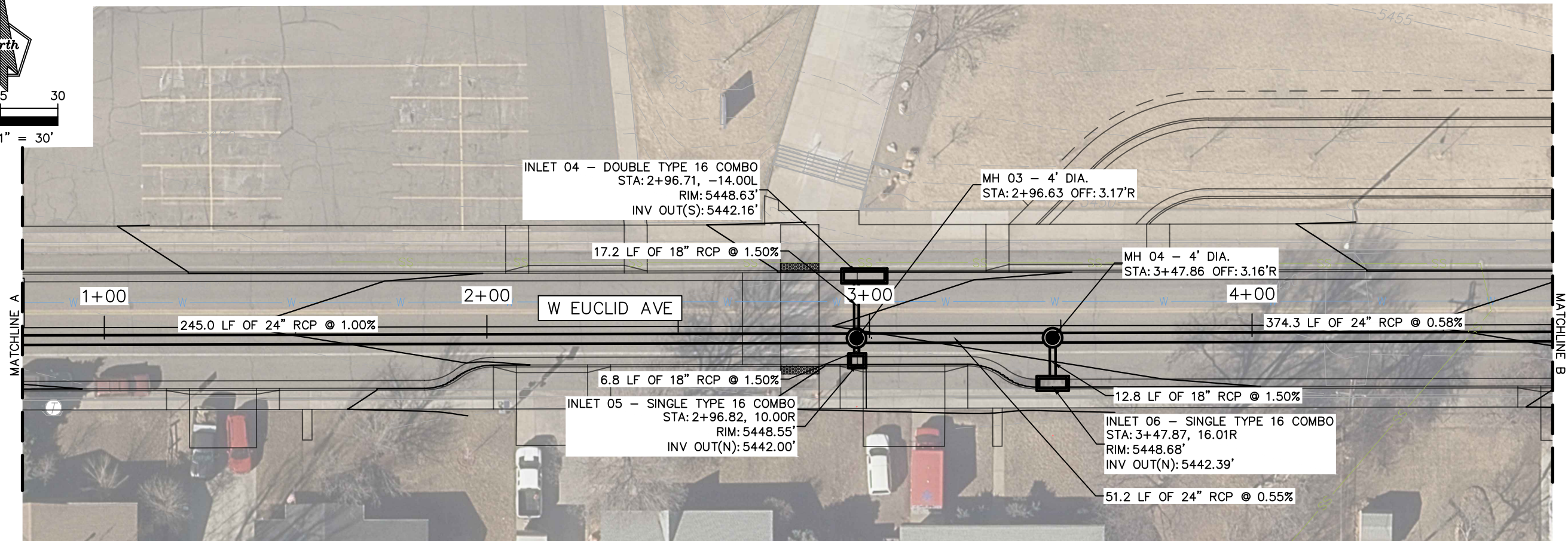
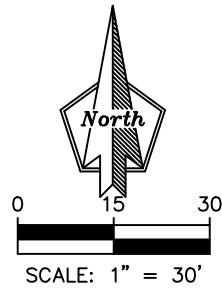
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STORM SEWER PLANS

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STORM SEWER PLANS

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Detailer
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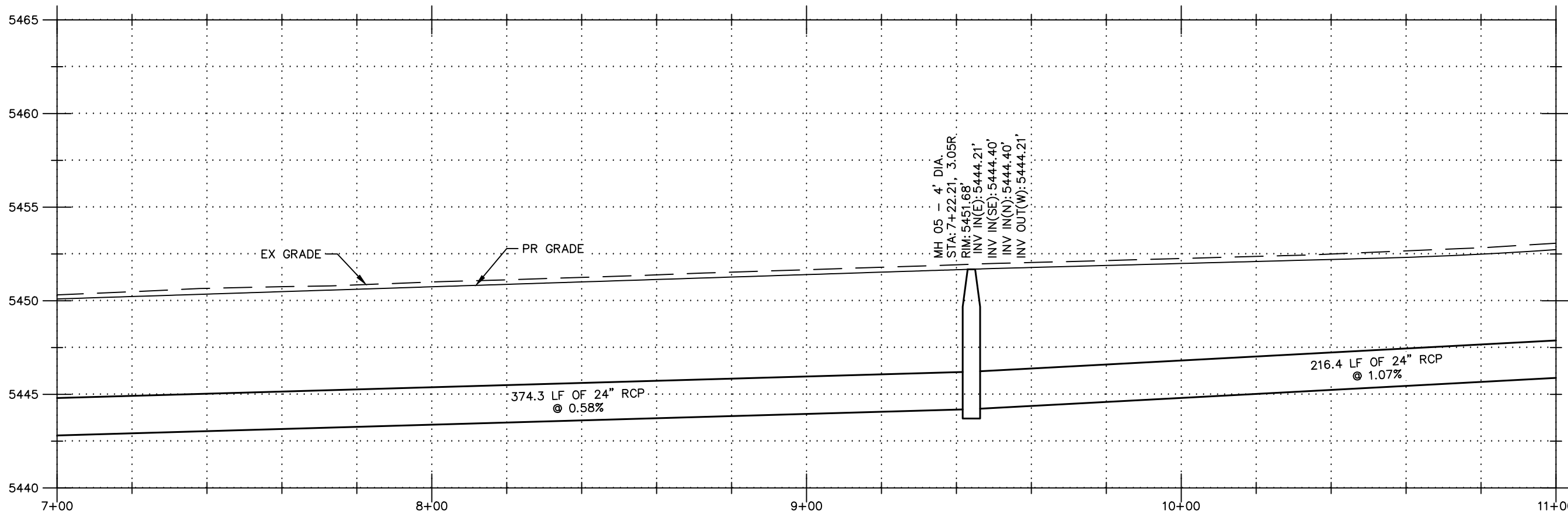
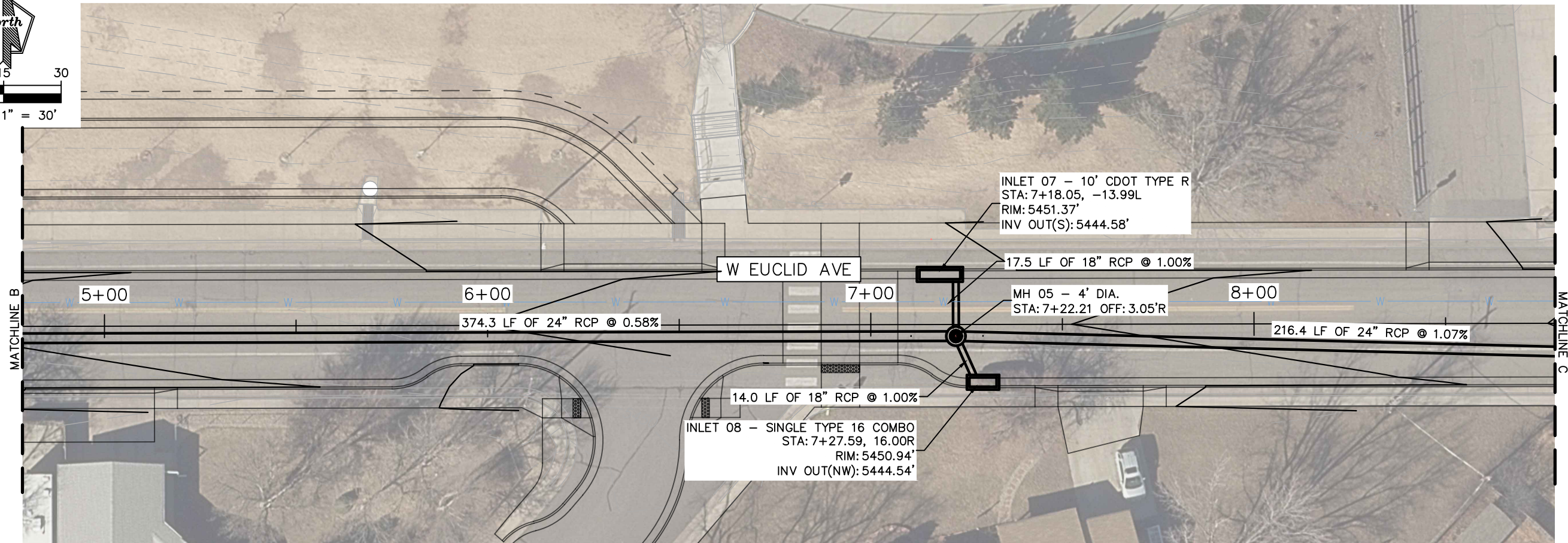
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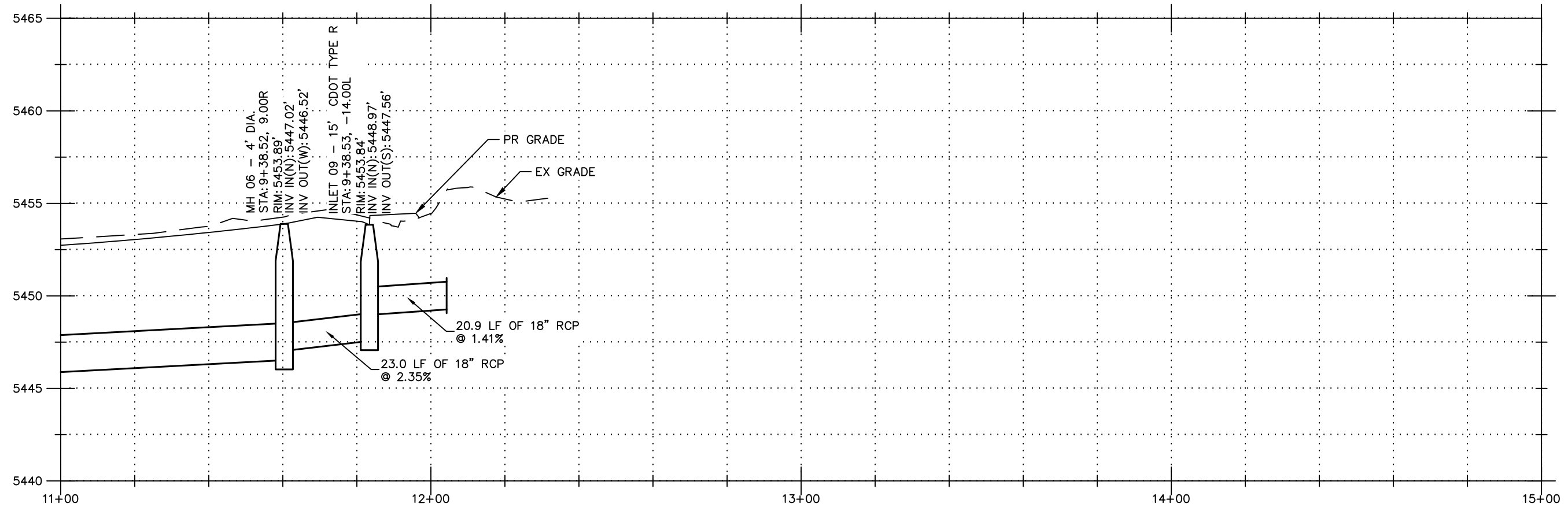
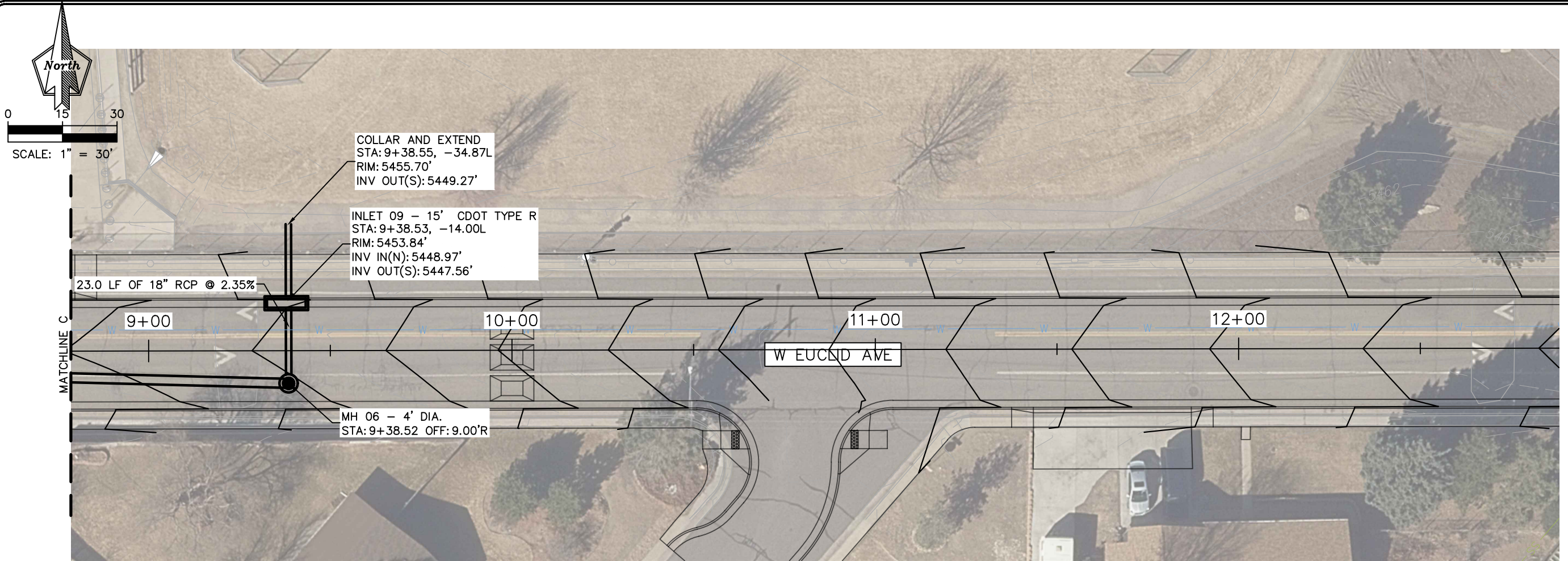


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SCALE: 1" = 30'



PATH: _____ PLOTTED BY: _____ PLOT DATE: _____
XREFS: _____

PATH: _____ PLOTTED BY: _____ PLOT DATE: _____
XREFS: _____



Contract ID 3194

143 of 159

PROJECT NUMBER

23-03

23-03
EUCLID AVENUE IMPROVEMENTS
STORM SEWER PLANS

Designer
Detailer
Checked

Littleton
Colorado
ENGINEERING & UTILITIES DIVISION
2255 West Berry Avenue
Littleton, CO 80120 (303) 795-3865
www.littletongov.org

INDEX OF REVISIONS

DATE

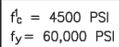
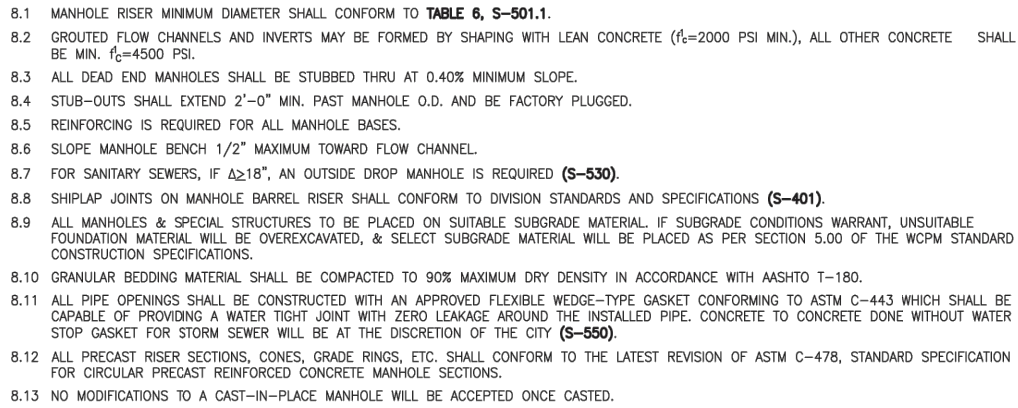
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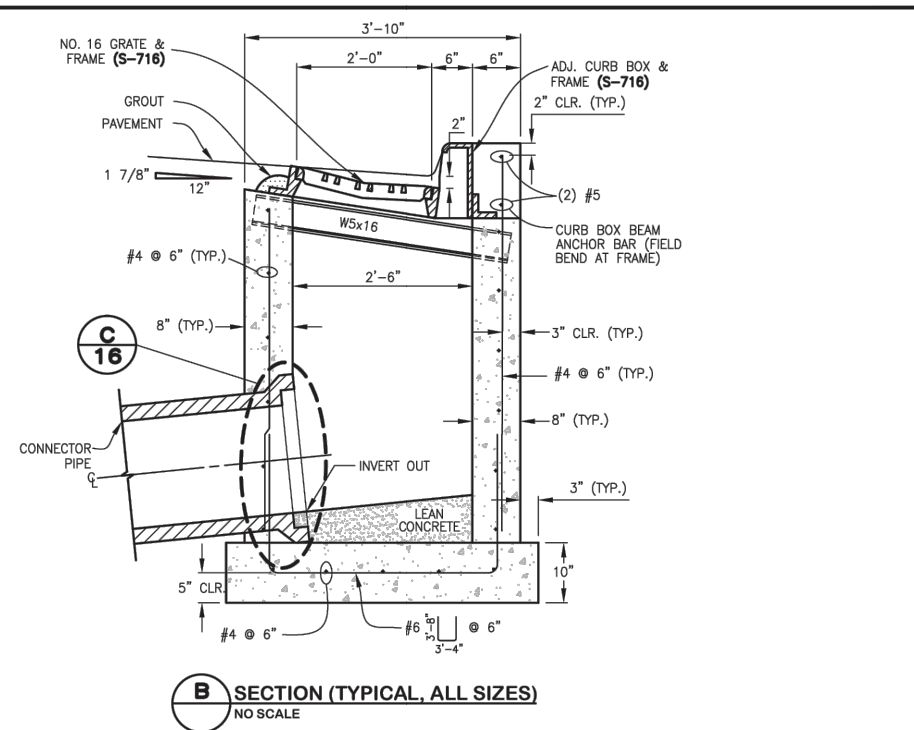
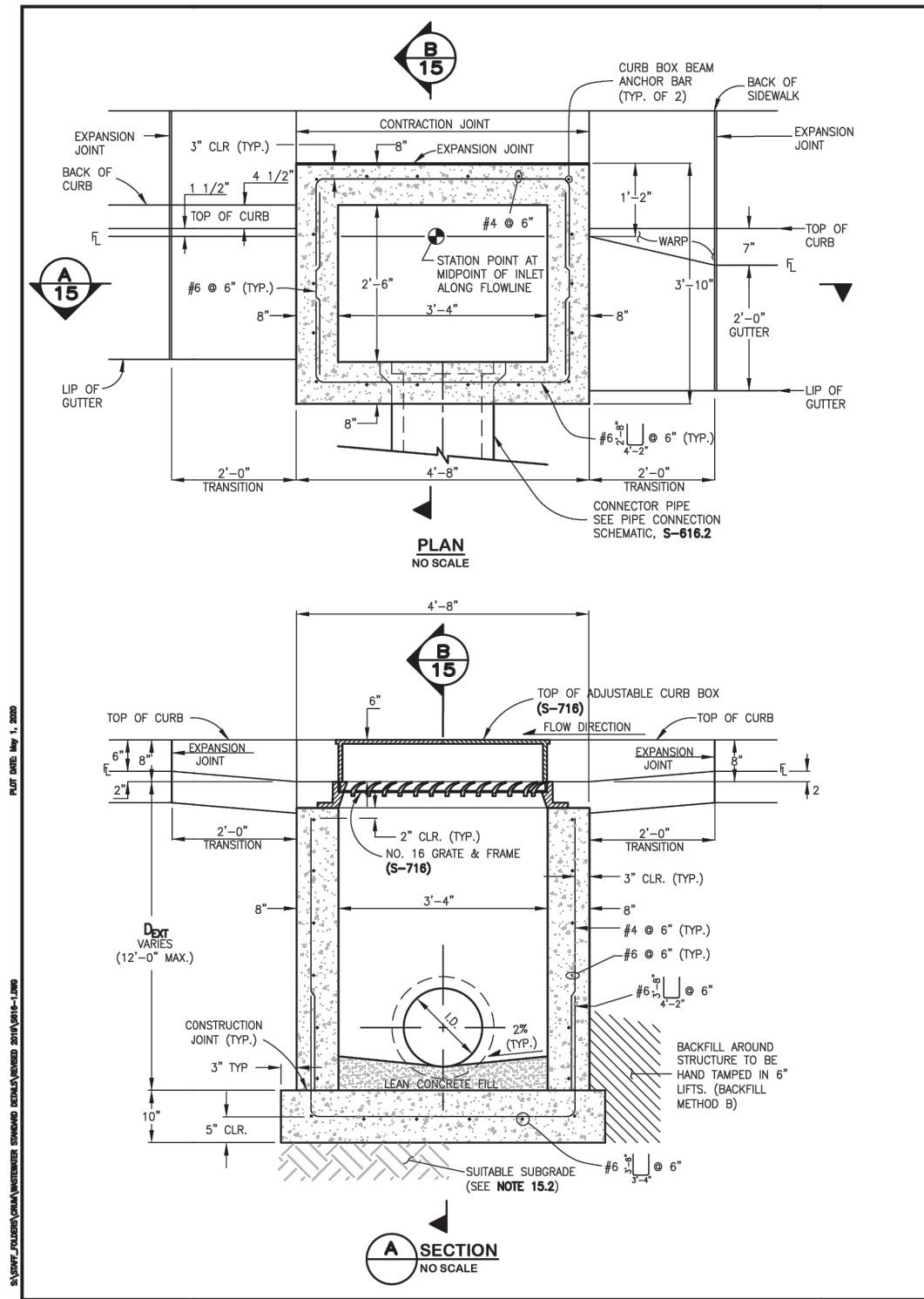
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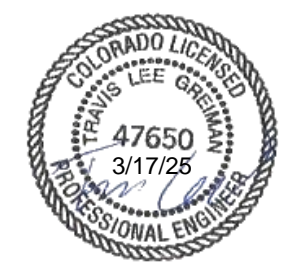
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SINGLE NUMBER 16 INLET NOTES:

- 15.1 FOR PAYMENT PURPOSES, INLET STRUCTURES SHALL ALSO INCLUDE 2'-0" CURB & GUTTER TRANSITION SECTION AT EACH END OF INLET PLUS SIDEWALK SECTIONS WHERE REQUIRED BEHIND INLET STRUCTURE AND TRANSITION SECTIONS.
- 15.2 SUB-GRADE SHALL BE 6-12" OF CLASS B BEDDING COMPACTED PER WCPM STANDARD CONSTRUCTION SPECIFICATIONS, ON SUITABLE, UNDISTURBED MATERIAL. IF SUBGRADE IS UNSUITABLE, THE SUBGRADE SHALL BE OVEREXCAVATED AND STABILIZED WITH CLASS B BEDDING PER WCPM STANDARD CONSTRUCTION SPECIFICATIONS.
- 15.3 FLOOR SLOPE MAY BE POURED MONOLITHIC WITH BASE.
- 15.4 S_c = SLOPE OF CONNECTOR = 2% MIN.
- 15.5 UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR OTHERWISE APPROVED, ALL NO. 16 INLETS SHALL BE CONSTRUCTED WITH AN ADJUSTABLE CAST IRON CURB BOX (S-716).
- 15.6 DESIGN CONDITIONS FOR INLET ALLOWS DEPTHS OF 12'-0" (MAX.). FOR INLETS MORE THAN 12'-0" FEET IN DEPTH, SHOP DRAWINGS AND DESIGN ANALYSIS SHALL BE SUBMITTED FOR APPROVAL.
- 15.7 ALL REINFORCING STEEL SHALL BE ASTM, A-615, GRADE 60 DEFORMED BARS. DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE A MINIMUM OF 6 BAR DIAMETER.
- 15.8 ALL SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017.
- 15.9 NO FORMWORK SHALL WORK REMAIN INSIDE STRUCTURE WHEN COMPLETE.
- 15.10 CONCRETE MIX FOR GUTTER AND ANY ADDED STREET PANELS SHALL MEET CLASS 2 REQUIREMENTS FOR SULFATE RESISTANCE IN ACCORDANCE WITH CDOT STANDARD 601.04 ON STREETS WHERE MAGNESIUM CHLORIDE CHEMICAL DEICERS ARE APPLIED. REFER TO WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11 FOR REQUIREMENTS FOR SULFATE RESISTANCE IN CONCRETE EXPOSED TO EARTH.
- 15.11 SPLICING OF REINFORCING STEEL SHALL BE PERMITTED ONLY WHERE DETAILED IN DRAWINGS.
- 15.12 INLET WALLS SHALL BE FORMED BOTH INSIDE AND OUTSIDE. CASTING OF SIDEWALLS AGAINST EARTH IS NOT PERMITTED.
- 15.13 LEAN CONCRETE FILL TO BE $f'c$ = 2000 PSI. INLET STRUCTURE, LID, STREET CURB AND GUTTER, AND PAVEMENT TO BE $f'c$ = 4,500 PSI, MAX W/CM = 0.45 AND AIR ENTRAINED 5% TO 8%. $f'c$ = 28 DAY COMPRESSIVE STRENGTH REQUIREMENT FOR MIX DESIGN, FIELD ACCEPTANCE.
- 15.14 FOR THROUGH STRUCTURES, BENCHES MUST COME TO TOP OF PIPE.
- 15.15 NO CORNER PENETRATIONS ON STRUCTURE.
- 15.16 SEE WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.04 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.
- 15.17 SEE S-616.2 FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.
- 15.18 REFER TO "TRANSPORTATION STANDARDS AND DETAILS FOR THE ENGINEERING DIVISION" FOR ADJACENT ROADWAY AND SIDEWALK DESIGN CRITERIA.


BY	
DATE	
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NO.	
	
CITY AND COUNTY OF DENVER 2000 W. 3RD AVE. DENVER, CO 80223 www.denvergov.org	
STANDARD DETAILS	
SINGLE NUMBER 16 INLET	
S-616.1	
DRAWN BY: _____	
DESIGNED BY: ASP/JDMT	
APPROVED BY: _____	
DRAWING NAME: S-616.1.dwg	
DATE: JUNE 2020	
SHEET NO.: 15	



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File Name: 1525-201872.18-CD-11-DRAINAGE PNP.dwg

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Date:	Comments	Initials	

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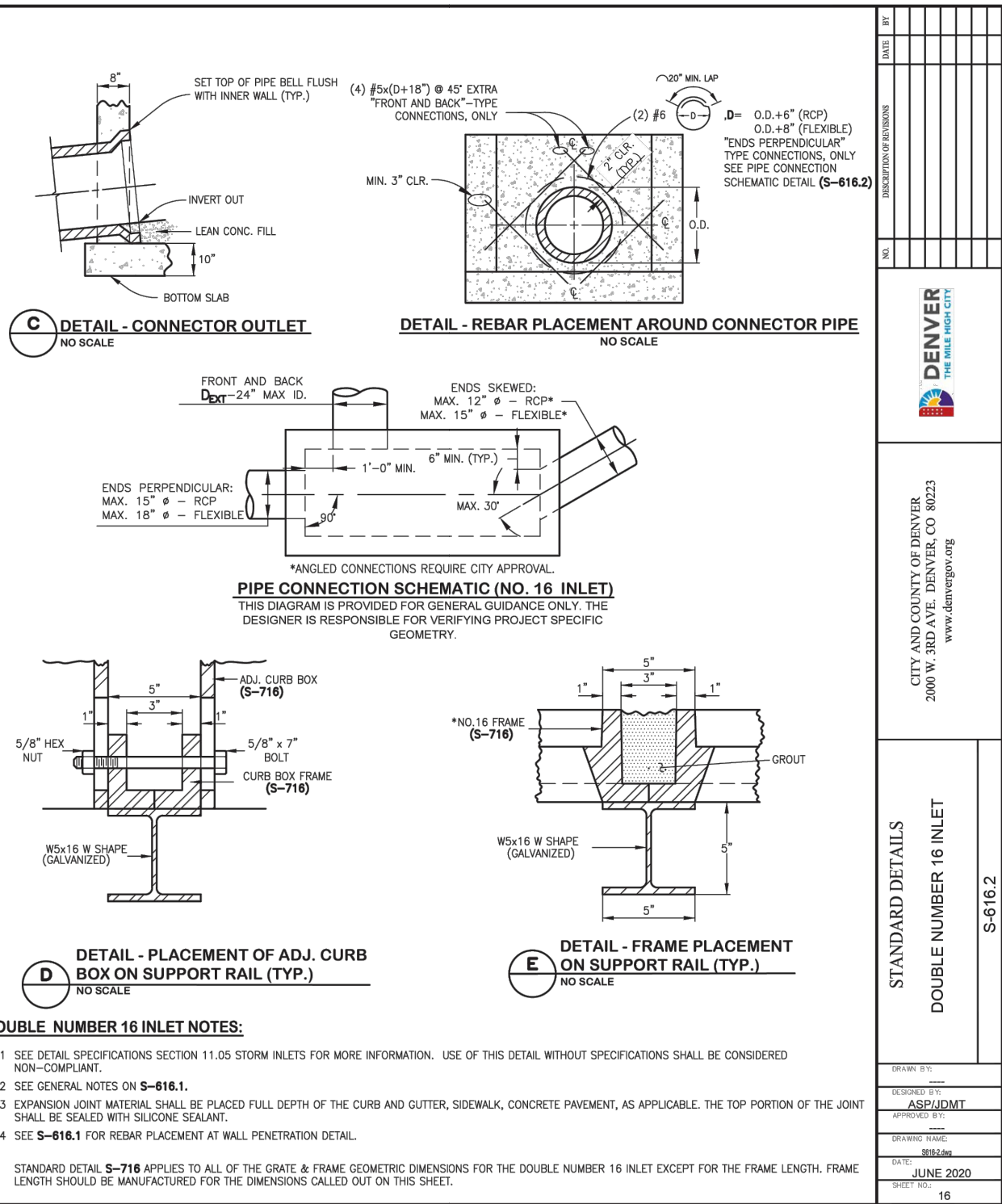
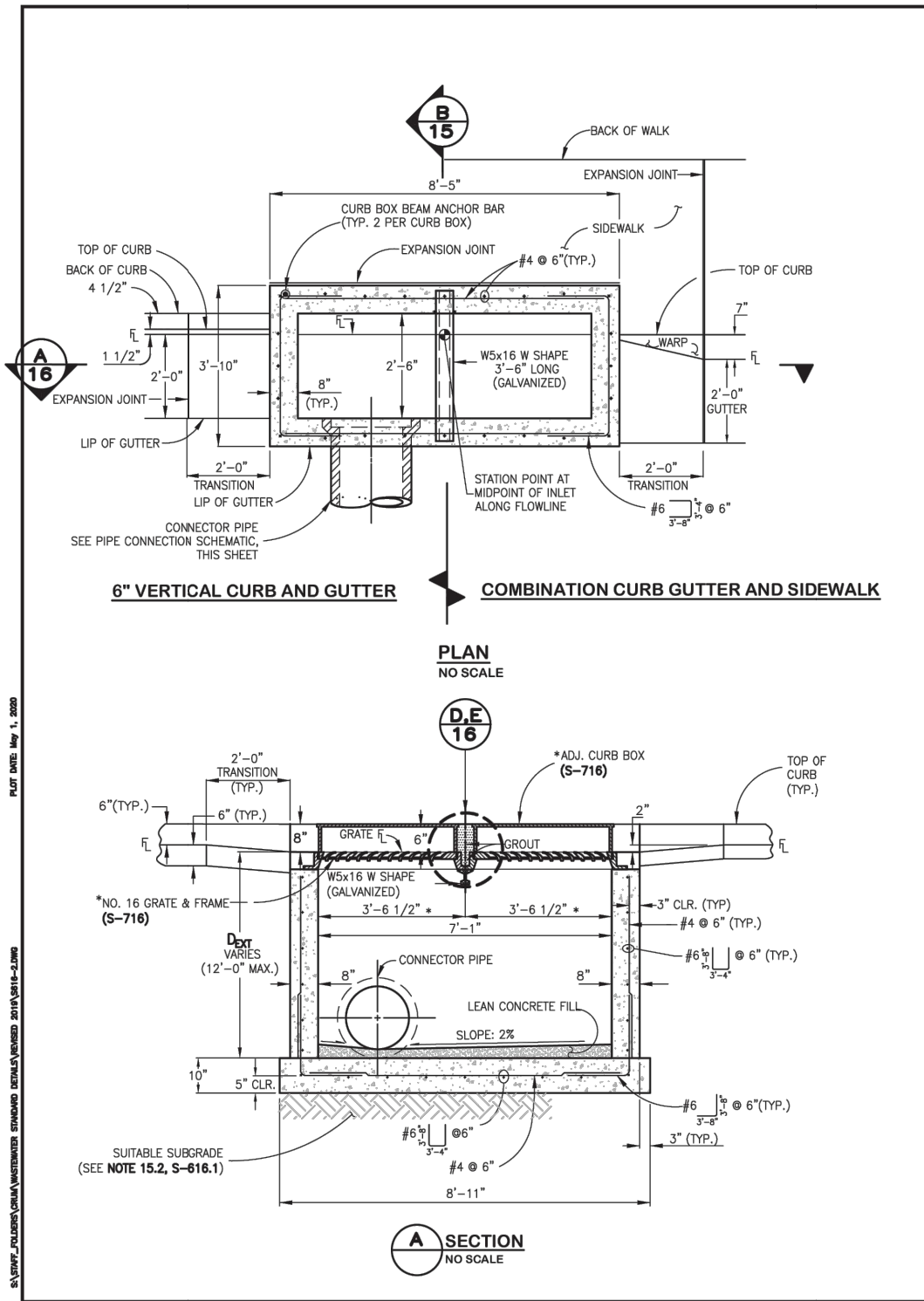


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Void:		Detailer:	LML	Numbers		
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BY	
DATE	
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CITY AND COUNTY OF DENVER 2000 W. 3RD AVE. DENVER, CO 80223 www.denvergov.org	
STANDARD DETAILS DOUBLE NUMBER 16 INLET S-616.2	
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DESIGNED BY:	ASP/JDMT
APPROVED BY:	
DRAWING NAME:	S-616.2.dwg
DATE:	JUNE 2020
SHEET NO.:	16



Print Date: 3/13/2025

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SIGN QUANTITIES																
SIGN NO.	LOCATION	SIDE	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE W x H (INCHES)	APPROX. AREA OF SIGN (SF)	SIGN BACKGROUND COLOR	202-00810	210-00810	614-00011	614-00012	614-00217	614-72860	614-80003	614-84000	503-00018
								REMOVAL OF GROUND SIGN	RESET GROUND SIGN	SIGN PANEL CLASS I	SIGN PANEL CLASS II	STEEL SIGN POSTS (2"x2" TELESPAR TUBING)	PEDESTRIAN PUSH BUTTON	RECTANGULAR RAPID FLASHING BEACON	TRAFFIC SIGNAL PEDESTRIAN POLE STL.	DRILLED SHAFT 18 INCH
								EA	EA	SF	SF	LF	EA	EA	EA	LF
1.01	0+29	RT	R1-1	STOP					1							
			R1-3P	ALL WAY												
			R7-1	NO PARKING ANY TIME												
1.02	0+50	LT	R1-1	STOP					1							
			STREET NAME SIGN	ELATI ST												
			STREET NAME SIGN	EUCLID AVE												
			R1-3P	ALL WAY												
1.03	1+60	RT	W17-1	SPEED HUMP	36 x 36	9	YELLOW				9	12.5				
			W13-1(15)	15 M.P.H.	18 x 18	2.25	YELLOW			2.25						
1.04	2+71	LT	S1-1	SCHOOL CROSSING SYMBOL	30 x 30	6.25	YELLOW-GREEN			6.25		1	1	1	6	
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)	24 x 12	2	YELLOW-GREEN			2						
			W16-7PR	DOWNWARD DIAGONAL ARROW (RIGHT)	24 x 12	2	YELLOW-GREEN			2						
			R10-25	PUSH BUTTON TO TURN ON WARNING LIGHTS	9 x 12	0.75	WHITE			0.75						
1.05	2+77	LT	R1-6B	IN-STREET SCHOOL CROSSING (YIELD)				1								
1.06	2+83	RT	S1-1	SCHOOL CROSSING SYMBOL				1								
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)												
1.07	2+85	RT	S1-1	SCHOOL CROSSING SYMBOL	30 x 30	6.25	YELLOW-GREEN			6.25		1	1	1	6	
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)	24 x 12	2	YELLOW-GREEN			2						
			W16-7PR	DOWNWARD DIAGONAL ARROW (RIGHT)	24 x 12	2	YELLOW-GREEN			2						
			R10-25	PUSH BUTTON TO TURN ON WARNING LIGHTS	9 x 12	0.75	WHITE			0.75						
1.08	2+99	LT	S1-1	SCHOOL CROSSING SYMBOL				1								
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)												
1.09	4+13	LT	W17-1	SPEED HUMP	36 x 36	9	YELLOW				9	11				
1.10	5+71	RT	W17-1	SPEED HUMP	36 x 36	9	YELLOW				9	11				
SIGN SUBTOTALS								3	2	24.25	27	34.5	2	2	2	12

NOTES:

1. SIGN POSTS SHALL BE STEEL 2"x2" TELESPAR TUBING. ALL SIGN POST SHALL INCLUDE ANCHOR SLEEVES.
2. SIGN POSTS INSTALLED WITHIN A HARDSCAPE AREA SHALL INCLUDE A 6" PVC SLEEVE. PVC SLEEVES ARE NOT REQUIRED WITHIN GRASS OR DIRT AREAS.
3. ANCHOR SLEEVES AND PVC SLEEVES SHALL BE INCLUDED IN THE COST OF THE TELESPAR TUBING.



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Void:	Detailer: CWD			
	Sheet Subset: S&S TABS	Subset Sheets: 1 OF 3		Sheet Number: 49 OF 60

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SIGN QUANTITIES																
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								REMOVAL OF GROUND SIGN	RESET GROUND SIGN	SIGN PANEL CLASS I	SIGN PANEL CLASS II	STEEL SIGN POSTS (2"x2" TELESPAR TUBING)	PEDESTRIAN PUSH BUTTON	RECTANGULAR RAPID FLASHING BEACON	TRAFFIC SIGNAL PEDESTRIAN POLE STL.	DRILLED SHAFT 18 INCH
								EA	EA	SF	SF	LF	EA	EA	EA	LF
1.11	6+14	RT	R7-6	NO PARKING LOADING ZONE				1								
			R7-9A	NO PARKING (SYMBOL) BIKE LANE												
1.12	6+62	LT	R1-1	EUCLID AVE				1								
			STREET NAME SIGN	ARAPAHOE DR												
			STREET NAME SIGN	EUCLID AVE												
1.13	6+85	LT	S1-1	SCHOOL CROSSING SYMBOL				1								
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)												
1.14	6+86	RT	S1-1	SCHOOL CROSSING SYMBOL	30 x 30	6.25	YELLOW-GREEN			6.25			1	1	1	6
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)	24 x 12	2	YELLOW-GREEN			2						
			W16-7PR	DOWNWARD DIAGONAL ARROW (RIGHT)	24 x 12	2	YELLOW-GREEN			2						
			R10-25	PUSH BUTTON TO TURN ON WARNING LIGHTS	9 x 12	0.75	WHITE			0.75						
1.15	6+88	RT	R1-6B	IN-STREET SCHOOL CROSSING (YIELD)				1								
1.16	6+90	LT	S1-1	SCHOOL CROSSING SYMBOL				1								
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)												
1.17	6+99	LT	S1-1	SCHOOL CROSSING SYMBOL	35 x 36	6.25	YELLOW-GREEN			6.25			1	1	1	6
			W16-7PL	DOWNWARD DIAGONAL ARROW (LEFT)	36 x 36	2	YELLOW-GREEN			2						
			W16-7PR	DOWNWARD DIAGONAL ARROW (RIGHT)	24 x 12	2	YELLOW-GREEN			2						
			R10-25	PUSH BUTTON TO TURN ON WARNING LIGHTS	9 x 12	0.75	WHITE			0.75						
1.18	8+07	LT	W17-1	SPEED HUMP	36 x 36	9	YELLOW				9	11				
1.19	8+42	LT	R3-4	NO U-TURN								16				
			R1-1	STOP												
			R3-2	NO LEFT TURN SYMBOL	36 x 36	9	WHITE				9					
2.01	9+44	LT	R3-7R	RIGHT LANE MUST TURN RIGHT	36 x 36	9	WHITE				9	12.5				
			R7-1	NO PARKING ANY TIME	12 x 18	1.5	WHITE				1.5					
SIGN SUBTOTALS								4	1	23.5	27	39.5	2	2	2	12

NOTES:

1. SIGN POSTS SHALL BE STEEL 2"x2" TELESPAR TUBING. ALL SIGN POST SHALL INCLUDE ANCHOR SLEEVES.
2. SIGN POSTS INSTALLED WITHIN A HARDSCAPE AREA SHALL INCLUDE A 6" PVC SLEEVE. PVC SLEEVES ARE NOT REQUIRED WITHIN GRASS OR DIRT AREAS.
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EUCLID AVE IMPROVEMENTS – PHASE 1

SIGNING TABULATIONS

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Sheet Subset: S&S TABS

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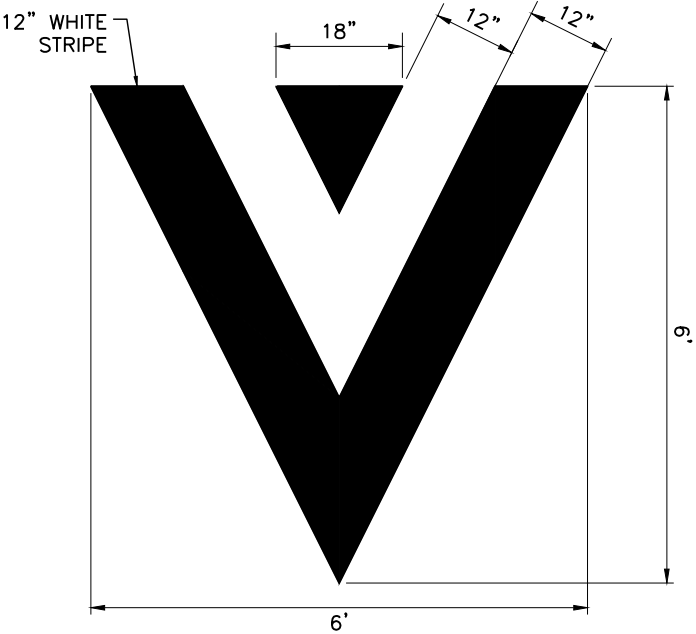
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SIGN QUANTITIES																
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								REMOVAL OF GROUND SIGN	RESET GROUND SIGN	SIGN PANEL CLASS I	SIGN PANEL CLASS II	STEEL SIGN POSTS (2"x2" TELES PAR TUBING)	PEDESTRIAN PUSH BUTTON	RECTANGULAR RAPID FLASHING BEACON	TRAFFIC SIGNAL PEDESTRIAN POLE STL.	DRILLED SHAFT 18 INCH
								EA	EA	SF	SF	LF	EA	EA	EA	LF
2.02	10+55	LT	W17-1	SPEED HUMP	36 x 36	9	YELLOW				9	12.5				
			W13-1(15)	15 M.P.H.	18 x 18	2.25	YELLOW			2.25						
2.03	10+99	RT	R1-1	STOP				1								
			STREET NAME SIGN	DELAWARE ST												
			STREET NAME SIGN	EUCLID AVE												
2.04	11+33	LT	R7-3	NO PARKING 8:00 AM TO 9:00 AM	12 x 18	1.5	WHITE			1.5		11				
			R7-3	NO PARKING 3:00 PM TO 4:00 PM	12 x 18	1.5	WHITE			1.5						
2.05	13+19	LT	R7-9A	NO PARKING (SYMBOL) BIKE LANE				1								
2.06	13+50	LT	R7-3	NO PARKING 8:00 AM TO 9:00 AM	12 x 18	1.5	WHITE			1.5		11				
			R7-3	NO PARKING 3:00 PM TO 4:00 PM	12 x 18	1.5	WHITE			1.5						
2.07	14+47	LT	R3-7	BIKE LANE	24 x 18	3	WHITE			3		11				
			R3-17B	ENDS	24 x 9	1.5	WHITE			1.5						
2.08	14+81	LT	R1-6B	IN-STREET SCHOOL CROSSING (YIELD)				1								
SIGN SUBTOTALS								1	1	11.25	9	45.5	0	0	0	0
SIGN TOTALS								8	4	59	63	120	4	4	4	24

NOTES:

1. SEE NOTES FROM SHEET 50.

PAVEMENT MARKING QUANTITIES								
LOCATION	627-00008					627-30405		627-30410
	MODIFIED EPOXY PAVEMENT MARKING					PREFORMED THERMOPLASTIC PAVEMENT MARKING		
	4" DOUBLE YELLOW LINE	4" WHITE EDGE LINE	4" WHITE GUIDE LINE (2' X 6' GAP)	8" WHITE EDGE LINE	12" WHITE HATCH LINE	TURN ARROW	SPEED TABLE	XWALK-STOPLINE
	LF	LF	LF	LF	LF	SF	SF	SF
0+14 TO 2+63	425	126						126
2+63 TO 6+26	667	232					24	100
6+26 TO 6+77	38							90
6+77 TO 8+56	300	79		98	25		24	100
8+56 TO 9+94	275	10	40	105		16		
9+94 TO 10+65	117	59					48	
10+65 TO 15+03	780	447			16			90
SUBTOTALS	2602	953	40	203	41	16	96	506
TOTAL (SF)	867	318	3	135	27	16	96	506
TOTAL (GALLONS)	16					-	-	-




DETAIL A - SPEED TABLE PAVEMENT MARKING
SCALE: NTS



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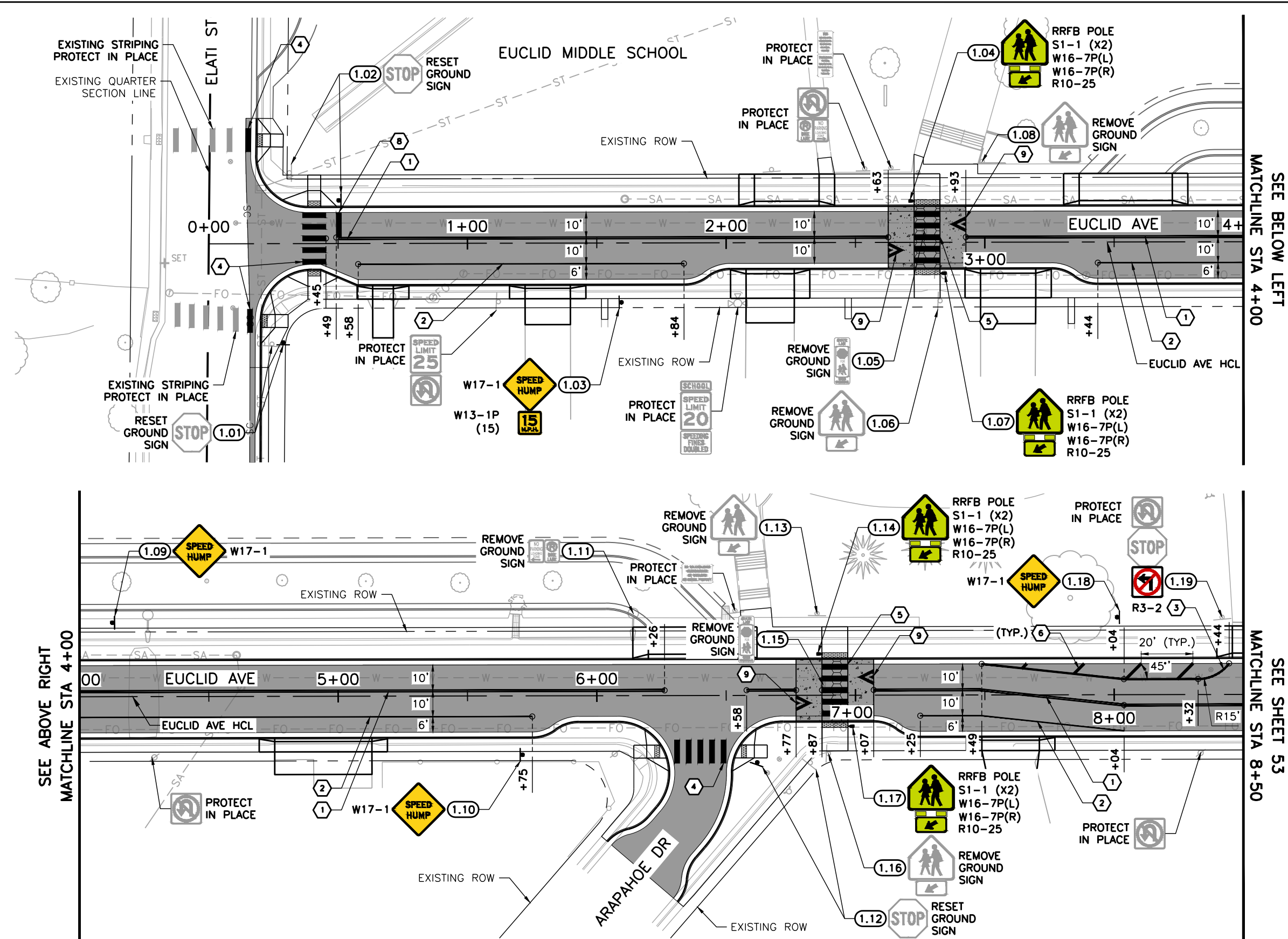
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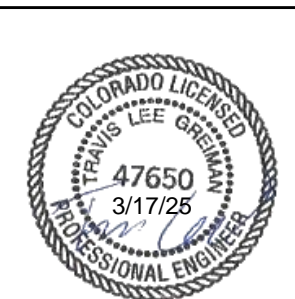
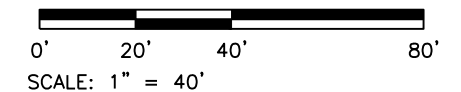


LEGEND:

- (X.XX) SIGN NO.
- 1 4" DOUBLE YELLOW LINE
 - 2 4" WHITE EDGE LINE
 - 3 8" WHITE EDGE LINE
 - 4 2' X 9' CROSSWALK BARS
 - 5 2' X 10' CROSSWALK BARS
 - 6 12" WHITE HATCH LINE
 - 7 4" WHITE GUIDE LINE (2' STRIPE X 6' GAP)
 - 8 24" WHITE STOP BAR
 - 9 SPEED TABLE PAVEMENT MARKING (SEE DETAIL A, SHEET 51)
 - 10 TURN LANE ARROW

NOTES:

1. LANE DIMENSIONS ARE FROM CENTER OF STRIPE TO CENTER OF STRIPE OR EDGE OF PAVEMENT.
2. TRUNCATED STATION CALLOUTS ARE PLACED AT EDGES OF PROPOSED PAVEMENT MARKINGS OR PI POINTS.
3. ALL SYMBOLS, CROSSWALKS AND STOP BARS ARE TO BE PERFORMED THERMOPLASTIC PAVEMENT MARKINGS. ALL OTHERS SHALL BE MODIFIED EPOXY PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED ON THE PLANS



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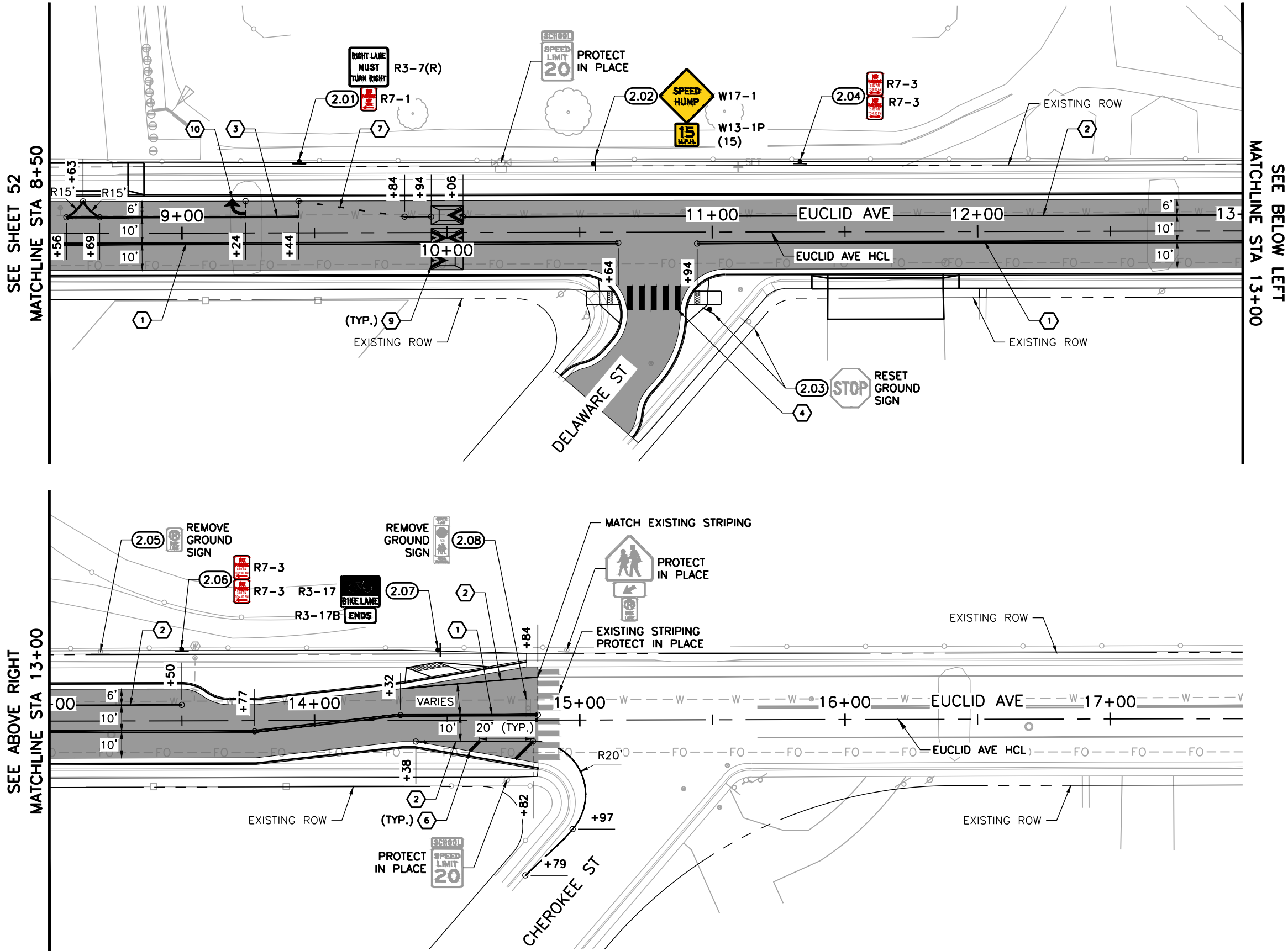
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		Sheet Subset:	S&S	Subset Sheets:	1 OF 2	Sheet Number: 52 OF 60

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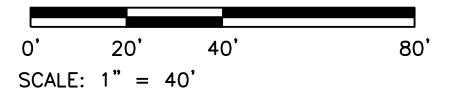


LEGEND:

- (X.XX) SIGN NO.
- 1 4" DOUBLE YELLOW LINE
 - 2 4" WHITE EDGE LINE
 - 3 8" WHITE EDGE LINE
 - 4 2' X 9' CROSSWALK BARS
 - 5 2' X 10' CROSSWALK BARS
 - 6 12" WHITE HATCH LINE
 - 7 4" WHITE GUIDE LINE (2' STRIPE X 6' GAP)
 - 8 24" WHITE STOP BAR
 - 9 SPEED TABLE PAVEMENT MARKING (SEE DETAIL A, SHEET 51)
 - 10 TURN LANE ARROW

NOTES:

- LANE DIMENSIONS ARE FROM CENTER OF STRIPE TO CENTER OF STRIPE OR EDGE OF PAVEMENT.
- TRUNCATED STATION CALLOUTS ARE PLACED AT EDGES OF PROPOSED PAVEMENT MARKINGS OR PI POINTS.
- ALL SYMBOLS, CROSSWALKS AND STOP BARS ARE TO BE PERFORMED THERMOPLASTIC PAVEMENT MARKINGS. ALL OTHERS SHALL BE MODIFIED EPOXY PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED ON THE PLANS



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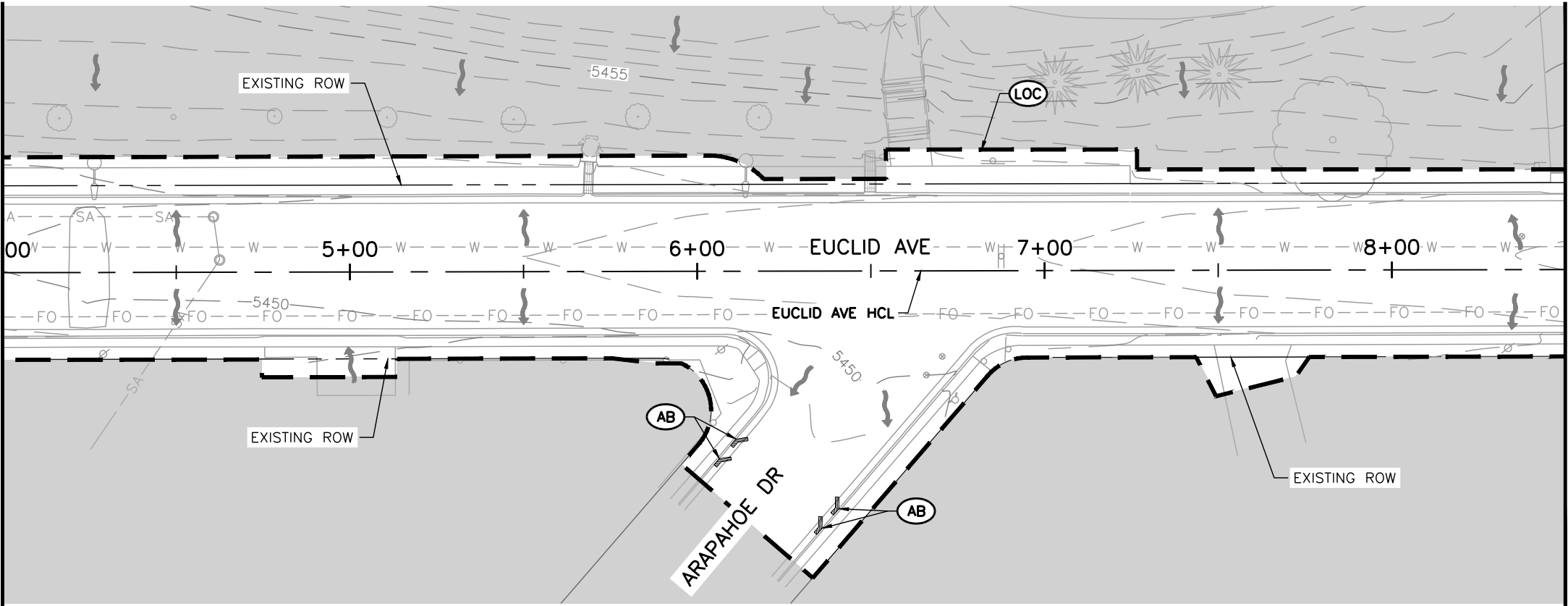
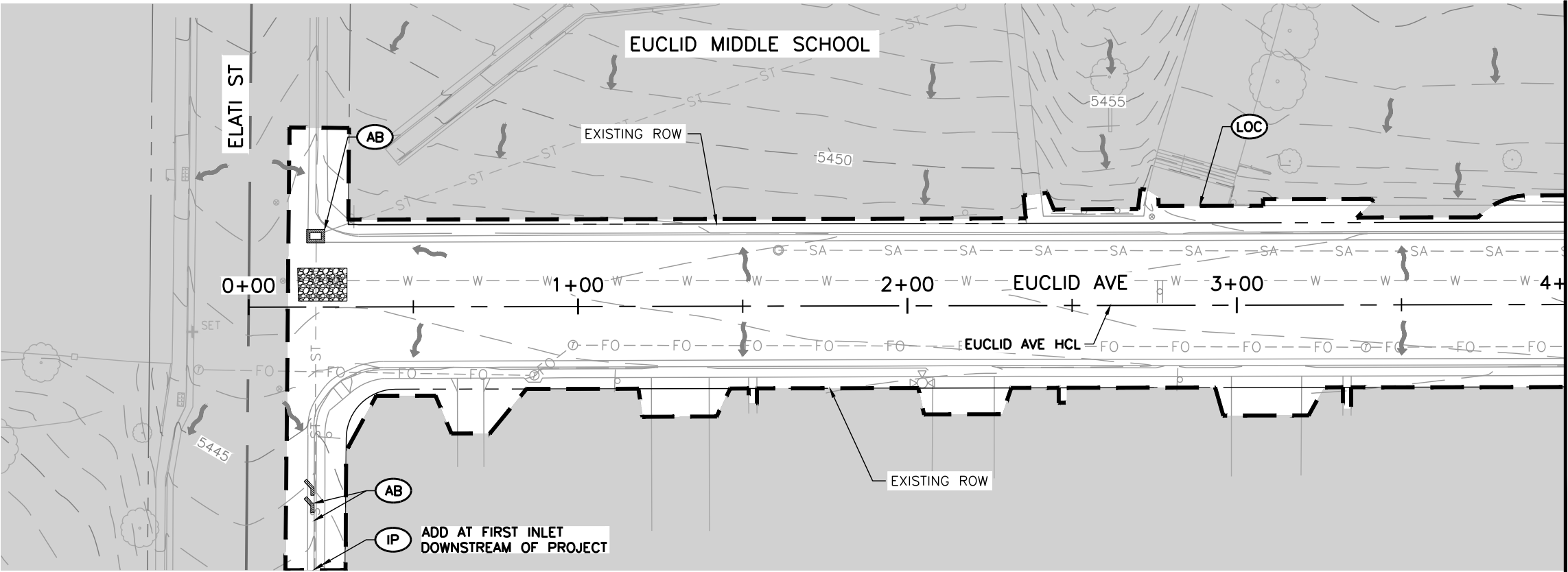
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Void:		Detailer:	CWD			
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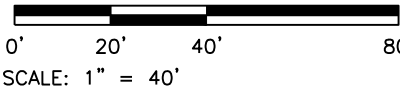


LEGEND:

- (LOC) LIMITS OF CONSTRUCTION
- (IP) INLET PROTECTION
- (AB) AGGREGATE BAG
- (SCL) SEDIMENT CONTROL LOG
- (RRB) REINFORCED ROCK BERM
- (VTC) VEHICLE TRACKING CONTROL
- (CWA) CONCRETE WASHOUT AREA
- (SOD) SOD
- (SM) SEEDING AND MULCHING
- (ECB) EROSION CONTROL BLANKET
- FLOW DIRECTION (EXISTING)
- FLOW DIRECTION (PROPOSED)
- AREA OUTSIDE OF LIMITS OF CONSTRUCTION

NOTES:

1. BMPS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO VERIFY THE INFORMATION SHOWN OR MODIFY AND FIELD-FIT AS NECESSARY.



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INITIAL PLANS

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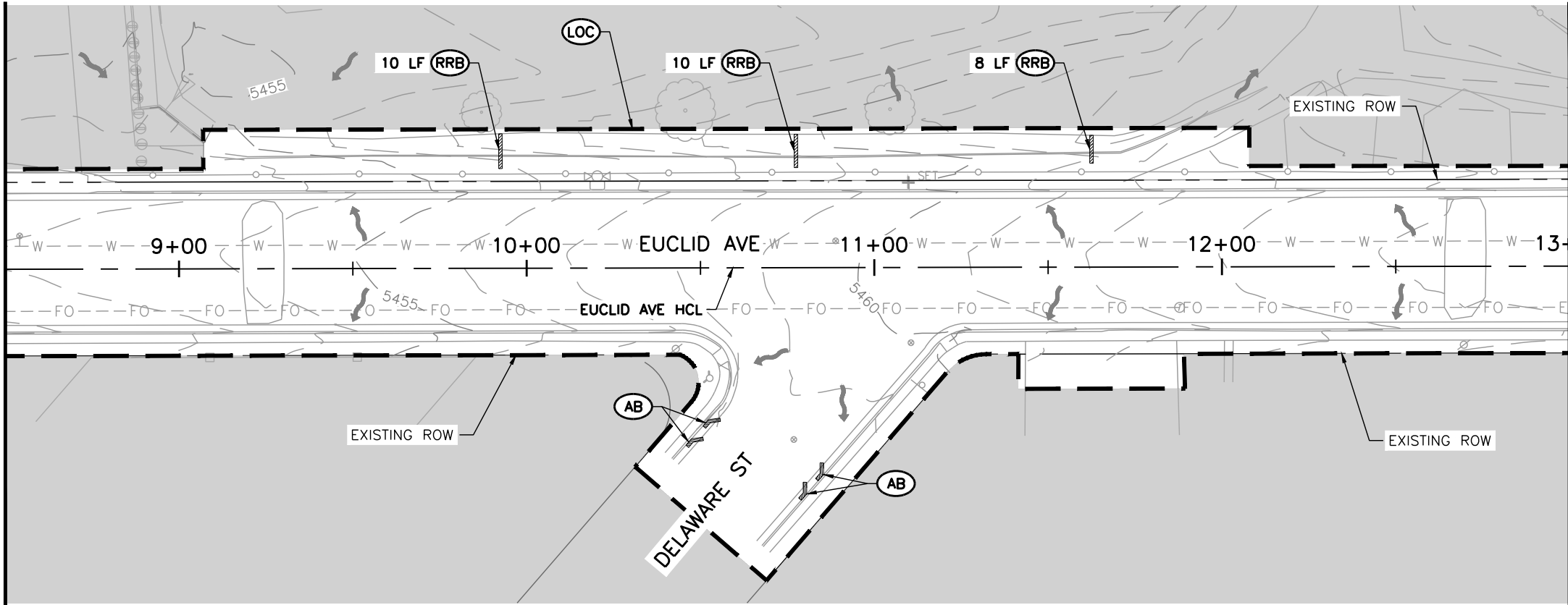
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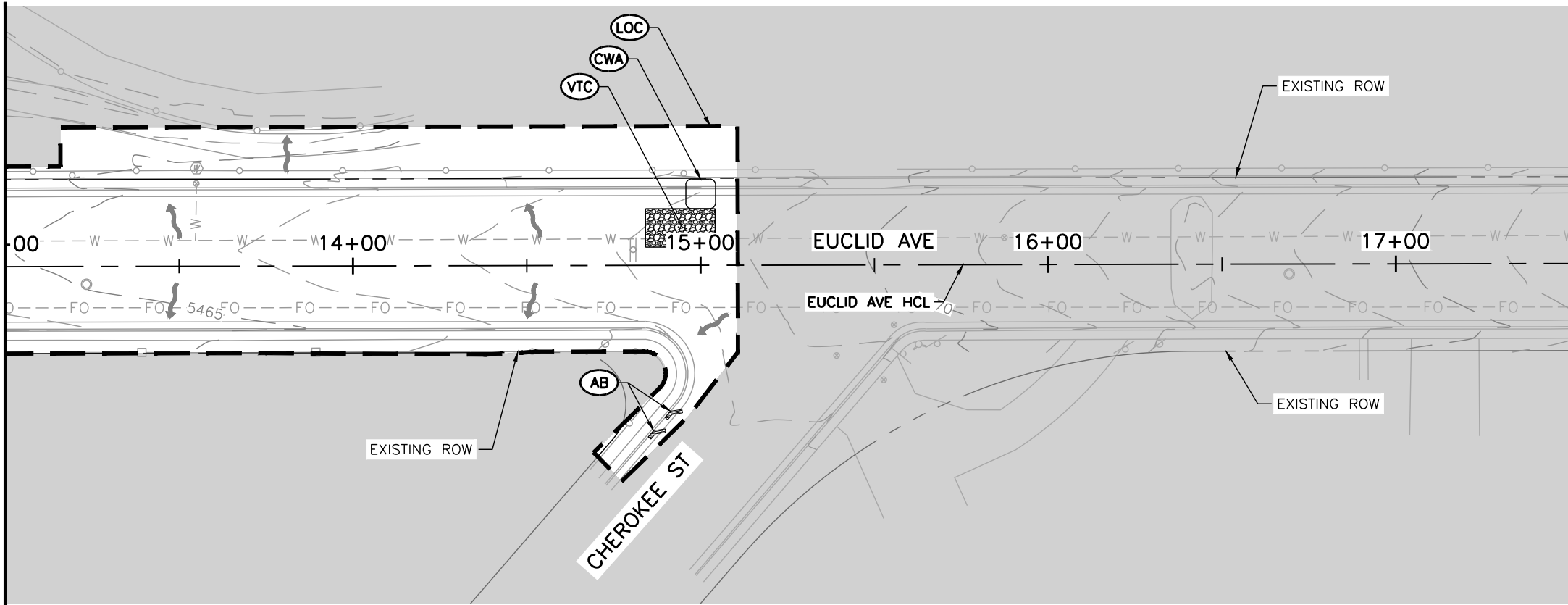
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SEE SHEET 54
MATCHLINE STA 8+50



SEE BELOW LEFT
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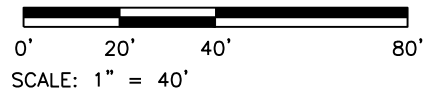


LEGEND:

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Date:	Comments	Initials

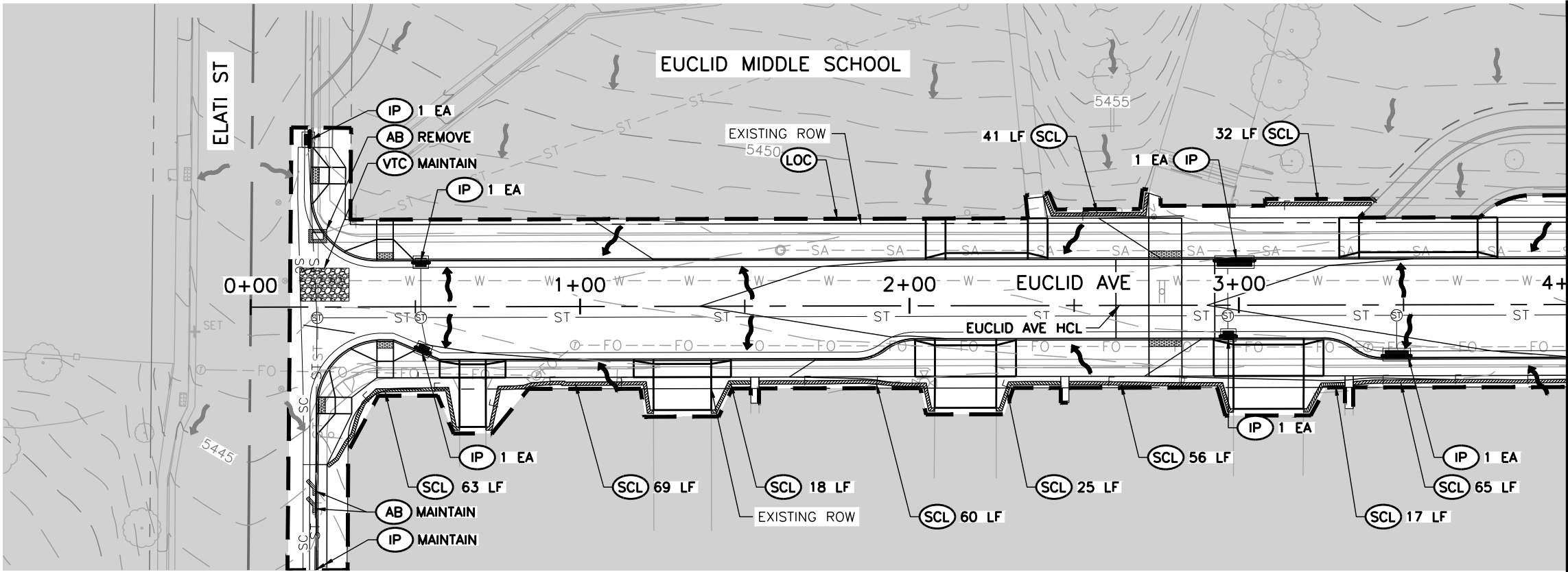
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Void:

EUCLID AVE IMPROVEMENTS – PHASE 1 GRADING EROSION AND SEDIMENT CONTROL INITIAL PLANS			
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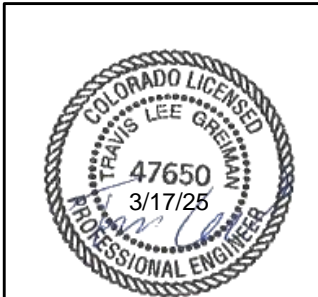
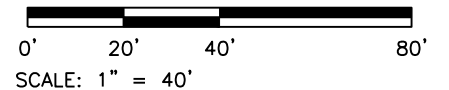
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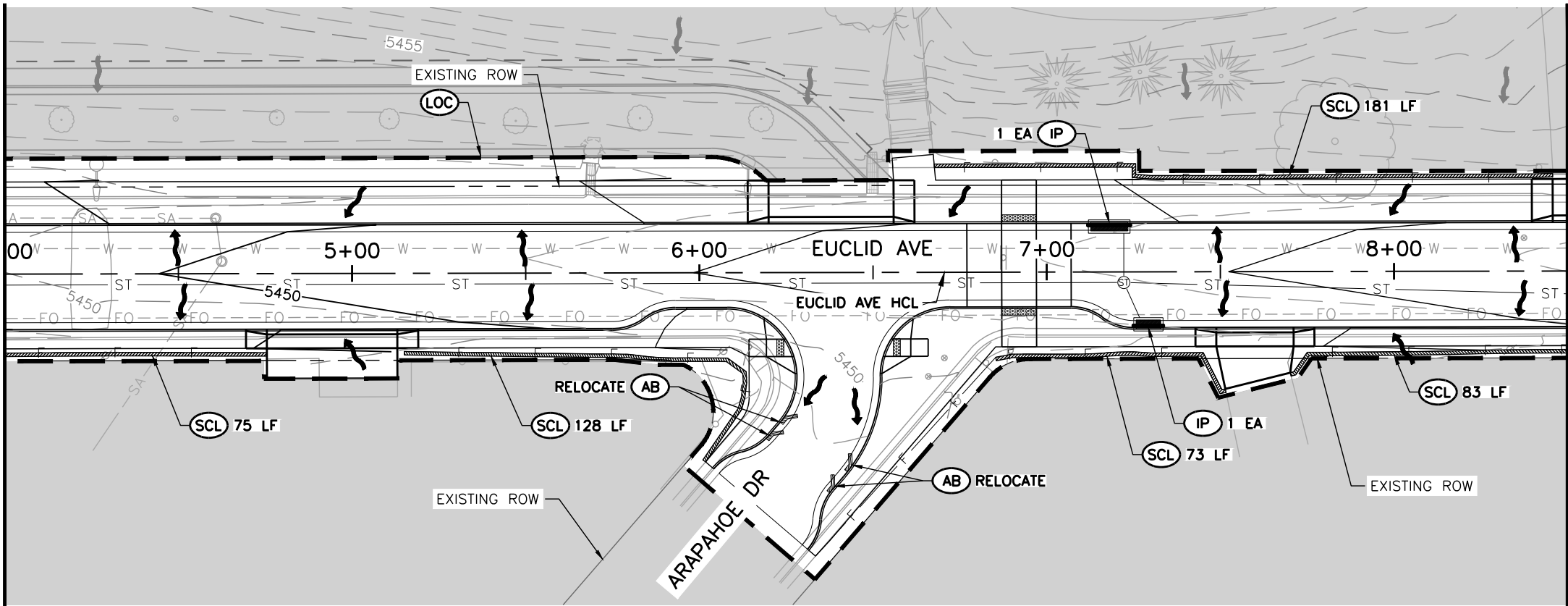
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- (IP) INLET PROTECTION
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NOTES:

1. BMPs SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO VERIFY THE INFORMATION SHOWN OR MODIFY AND FIELD-FIT AS NECESSARY.



SEE ABOVE RIGHT
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SEE SHEET 57
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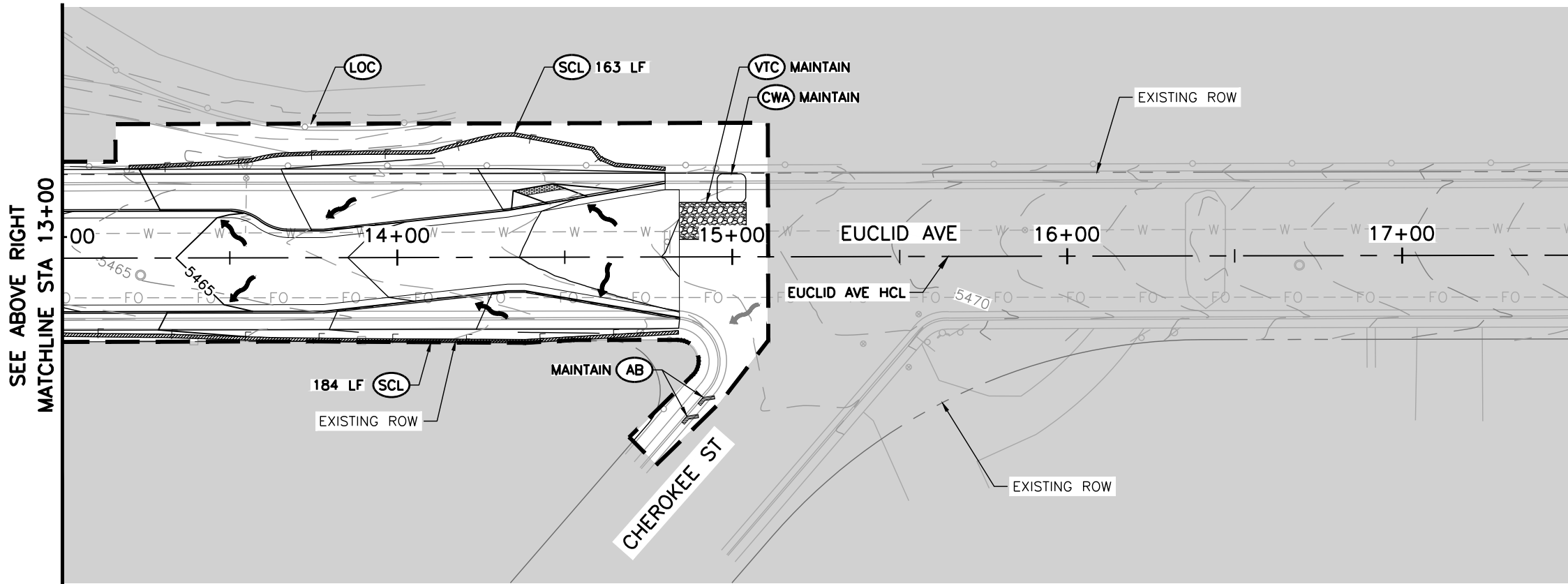
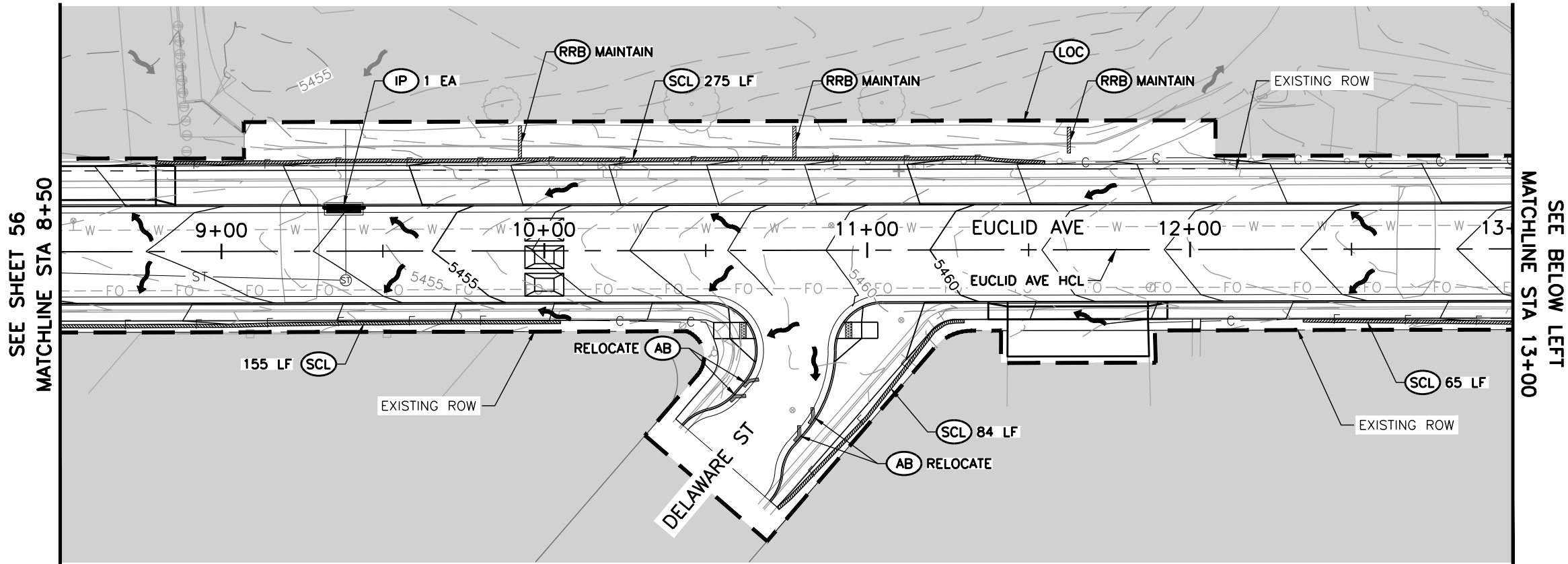
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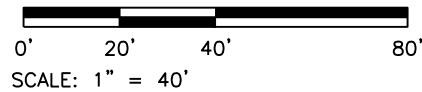


LEGEND:

- LOC LIMITS OF CONSTRUCTION
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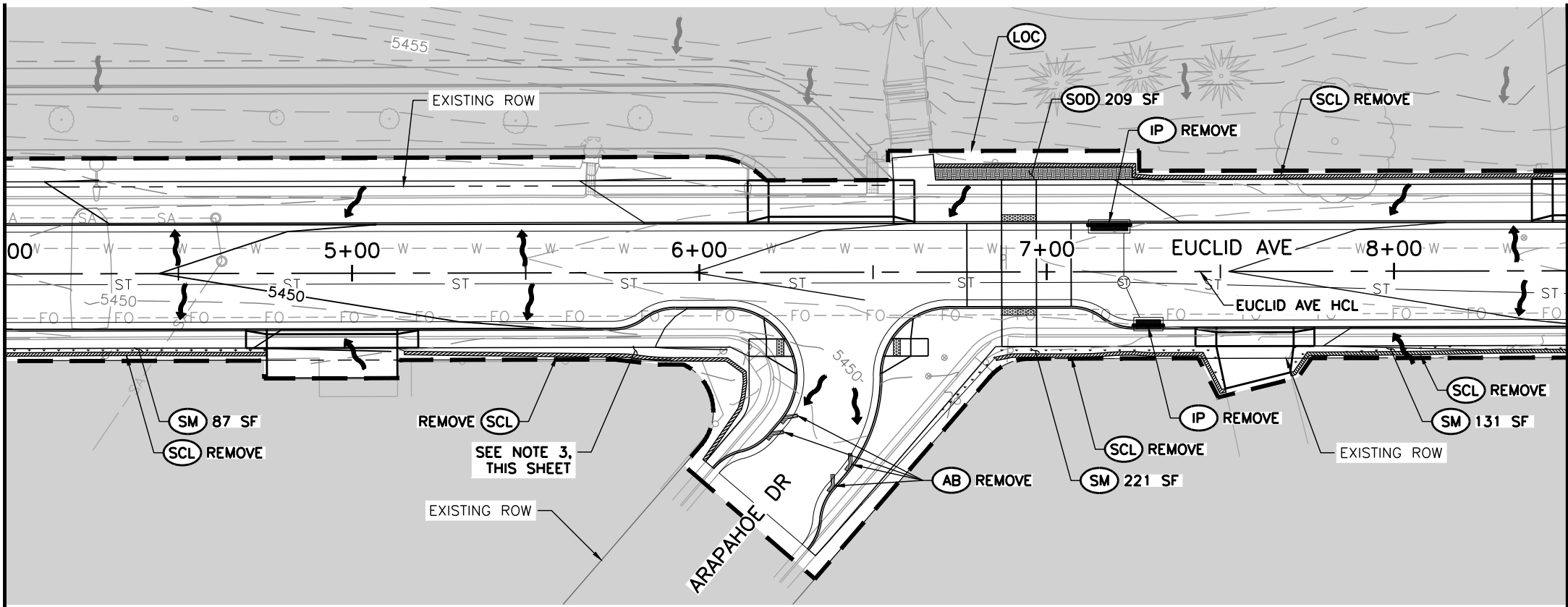
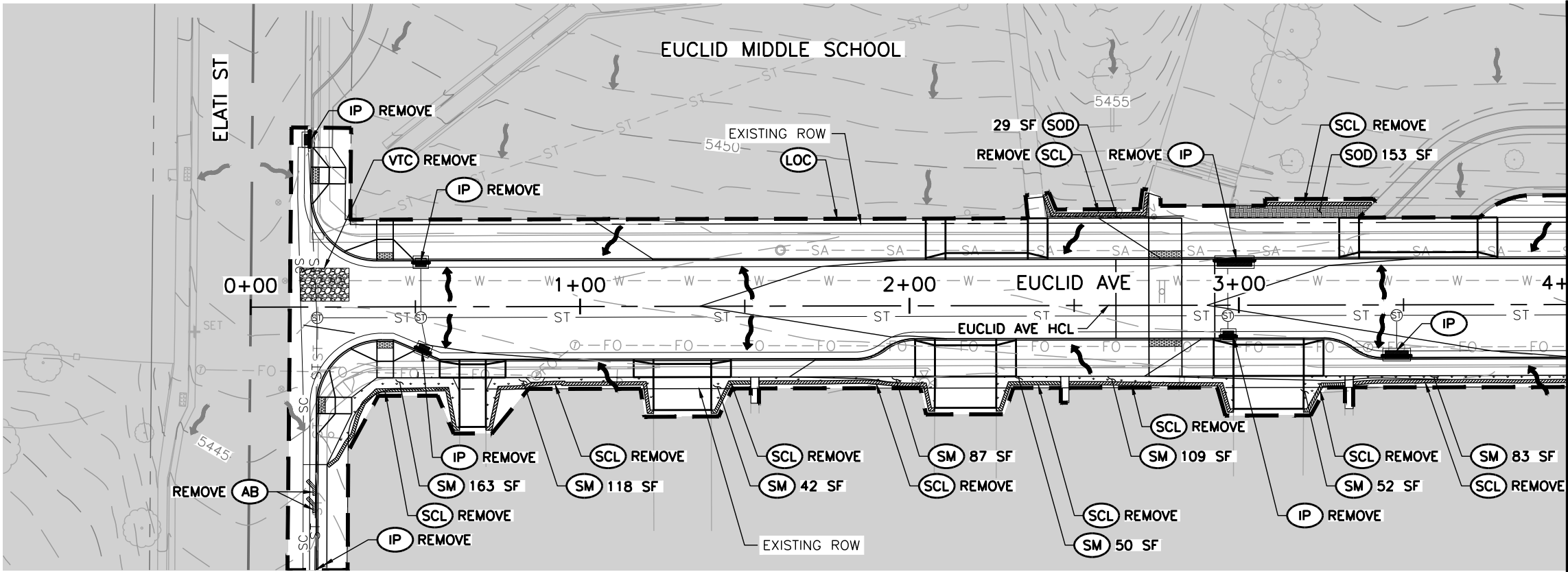
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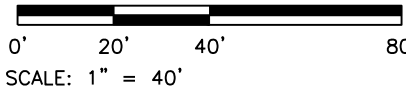


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- FLOW DIRECTION (EXISTING)
- FLOW DIRECTION (PROPOSED)
- AREA OUTSIDE OF LIMITS OF CONSTRUCTION

NOTES:

- EROSION CONTROL MANAGEMENT SHALL BE LUMP SUM. SEEDING, MULCHING, AND TOPSOIL SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF WORK FOR LANDSCAPE RESTORATION AND SHALL BE LUMP SUM. BMPS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO VERIFY THE INFORMATION SHOWN OR MODIFY AND FIELD-FIT AS NECESSARY.
- SEEDING, MULCHING, AND LANDSCAPE RESTORATION SHOULD MATCH EXISTING LANDSCAPING OR AS DIRECTED BY THE ENGINEER.
- REMOVE EXISTING STONE. ADD EMBANKMENT MATERIAL. REPLACE STONE.



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GRADING EROSION AND SEDIMENT CONTROL
FINAL PLANS**

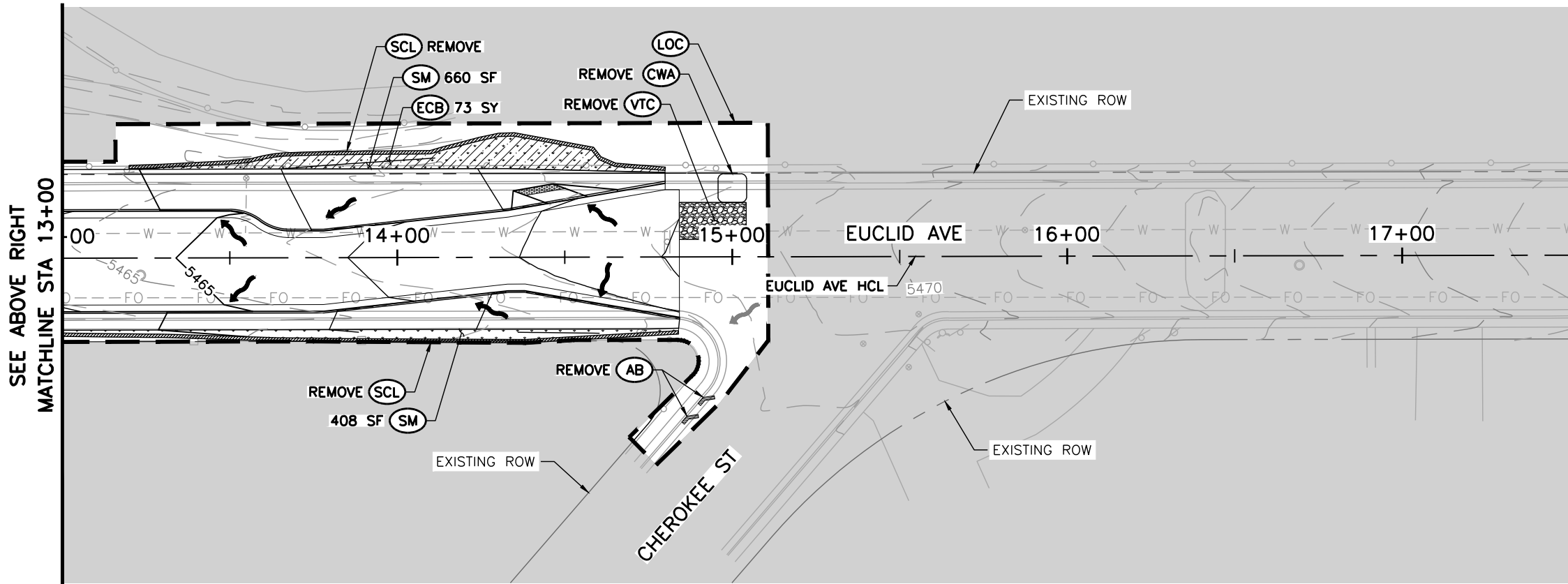
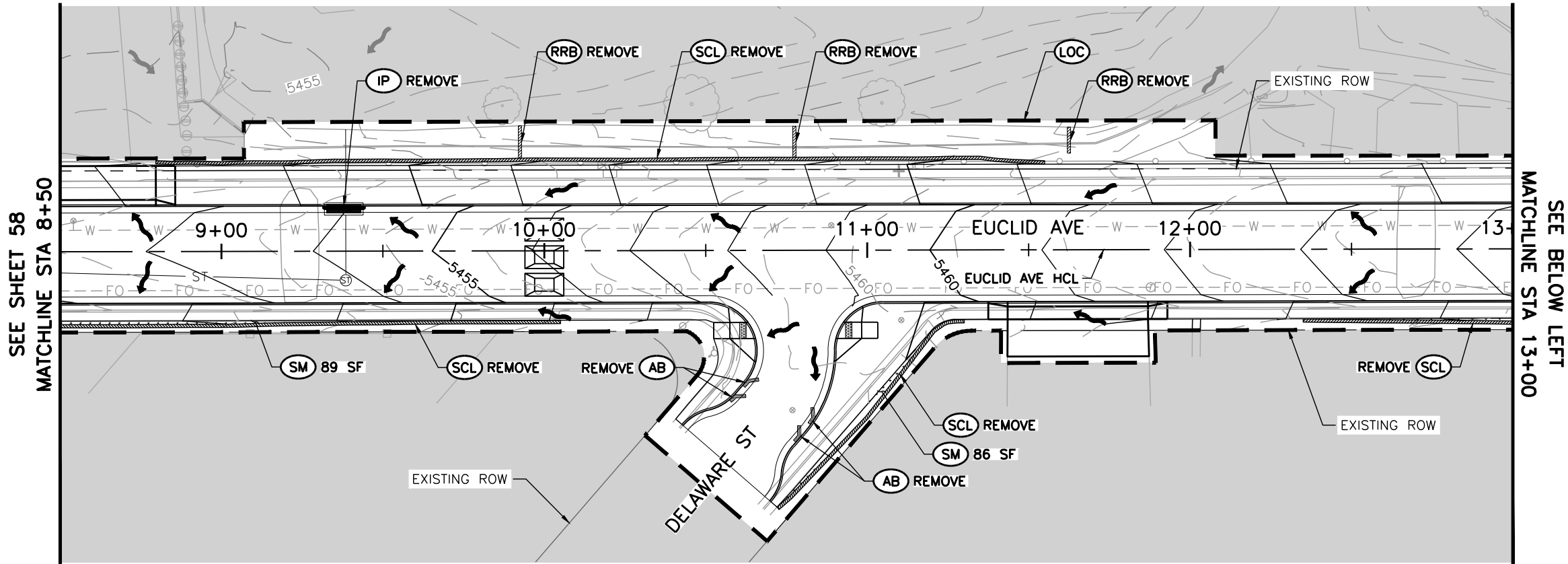
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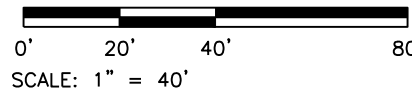


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- AREA OUTSIDE OF LIMITS OF CONSTRUCTION

NOTES:

1. EROSION CONTROL MANAGEMENT SHALL BE LUMP SUM. SEEDING, MULCHING, AND TOPSOIL SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF WORK FOR LANDSCAPE RESTORATION AND SHALL BE LUMP SUM. BMPS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO VERIFY THE INFORMATION SHOWN OR MODIFY AND FIELD-FIT AS NECESSARY.
2. SEEDING, MULCHING, AND LANDSCAPE RESTORATION SHOULD MATCH EXISTING LANDSCAPING OR AS DIRECTED BY THE ENGINEER.



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GRADING EROSION AND SEDIMENT CONTROL
FINAL PLANS

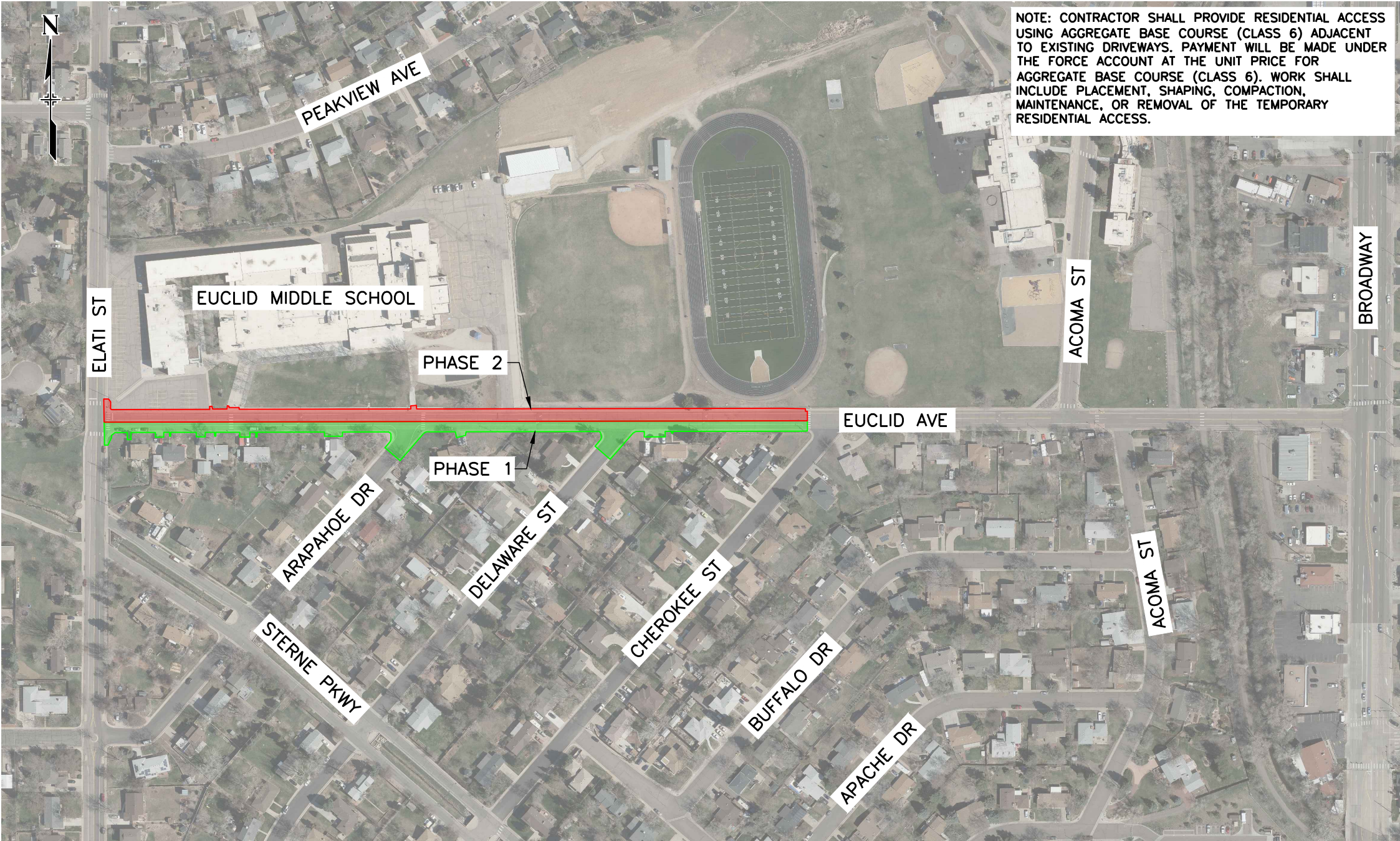
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LEGEND:

- WORK AREA - PHASE 1
- WORK AREA - PHASE 2

PHASE 1 CONSTRUCTION

- SAWCUT AND REMOVE EXISTING CURB RAMPS, CURB AND GUTTER, SIDEWALKS SECTIONS, AND DRIVEWAY SECTIONS ON THE SOUTH SIDE OF EUCLID AVE (BETWEEN ELATI ST AND CHEROKEE ST).
- SAWCUT AND REMOVE EXISTING PAVEMENT ON THE SOUTH SIDE OF EUCLID AVE BETWEEN EXISTING CURB AND CUTTER AND THE PROPOSED EUCLID AVE HCL (BETWEEN ELATI ST AND CHEROKEE ST).
- INSTALL STORM SEWER TRUNK LINE, AS WELL AS INLETS, MANHOLES, AND LATERAL STORM SEWER LINES LOCATION ON THE SOUTH SIDE OF EUCLID AVE,
- CONSTRUCT NEW CURB RAMPS, CURB AND GUTTER, SIDEWALK SECTIONS AND DRIVEWAY SECTIONS ON THE SOUTH SIDE OF EUCLID AVE (BETWEEN ELATI ST AND CHEROKEE ST). DURING CONSTRUCTION ALLOW ENTRY TO ALL PROPERTIES UNLESS THERE IS CURRENT CONCRETE WORK BEING PREFORMED.
- CONSTRUCT ROADWAY PAVEMENT AND RAISED PEDESTRIAN CROSSINGS BETWEEN PROPOSED CURB AND GUTTER AND PROPOSED EUCLID AVE HCL (BETWEEN ELATI ST AND CHEROKEE ST).
- RESTORE LANDSCAPING TO ALL IMPACTED PROPERTIES ON THE SOUTH SIDE OF EUCLID AVE. LANDSCAPING SHALL BE RESTORED WITHIN SEVEN (7) DAYS AND DAMAGED IRRIGATION PIPES MUST BE REPAIRED WITHIN TWENTY-FOUR (24) HOURS.

PHASE 2 CONSTRUCTION

- SAWCUT AND REMOVE EXISTING CURB RAMPS, CURB AND GUTTER, AND SIDEWALKS SECTIONS THE NORTH SIDE OF EUCLID AVE (BETWEEN ELATI ST AND CHEROKEE ST).
- SAWCUT AND REMOVE EXISTING PAVEMENT ON THE NORTH SIDE OF EUCLID AVE BETWEEN EXISTING CURB AND CUTTER AND THE PROPOSED EUCLID AVE HCL (BETWEEN ELATI ST AND CHEROKEE ST).
- INSTALL STORM SEWER INLETS, MANHOLES, AND LATERAL STORM SEWER LINES LOCATED ON THE NORTH SIDE OF EUCLID AVE.
- CONSTRUCT NEW CURB RAMPS, CURB AND GUTTER, AND SIDEWALK SECTIONS ON SOUTH SIDE OF EUCLID AVE (BETWEEN ELATI ST AND CHEROKEE ST).
- CONSTRUCT ROADWAY PAVEMENT AND RAISED PEDESTRIAN CROSSINGS BETWEEN PROPOSED CURB AND GUTTER AND PROPOSED EUCLID AVE HCL (BETWEEN ELATI ST AND CHEROKEE ST).
- CENTER LANE LINES AND EDGE LINES SHALL BE PLACED AS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS. STOP BARS AND CROSSWALK BARS SHALL BE PLACED AS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.

PHASE 3 CONSTRUCTION

- INSTALL TOP LIFT OF ASPHALT BETWEEN ELATI STREET AND CHEROKEE STREET.

GENERAL NOTES:

- ONE WAY TRAFFIC IS PERMITTED.
- DURING PHASE 1 CONSTRUCTION, WESTBOUND LANE SHALL BE MAINTAINED. UNLESS THE CONTRACTOR IS ACTIVELY CONSTRUCTING OR CURING CURB, GUTTER, SIDEWALK, OR DRIVEWAYS, RESIDENTIAL ACCESS SHALL BE MAINTAINED BETWEEN 5:00 PM AND 8:00 AM. DURING PERIODS WHERE DRIVEWAYS WILL NOT BE ACCESSIBLE, CONTRACTOR SHALL PROVIDE RESIDENTS THREE (3) DAYS ADVANCED NOTICE.
- DURING PHASE 2 CONSTRUCTION, EASTBOUND LANE SHALL BE MAINTAINED.
- TRAFFIC LANES SHALL BE A MINIMUM OF 10 FEET WIDE FOR EACH PHASE OF CONSTRUCTION.
- SIDEWALKS SHALL BE CLOSED ON ONLY ONE SIDE OF THE STREET AT A TIME. WHEN A SIDEWALK IS CLOSED, "SIDEWALK CLOSED" SIGNS SHALL BE PLACED AT THE CLOSURE POINT AND "SIDEWALK CLOSED AHEAD CROSS HERE" OR "PEDESTRIAN DETOUR" SIGNS SHALL BE PLACED AT THE NEXT CROSSWALK PRIOR. WHERE THE NEXT CROSSWALK PRIOR IS AN UNREASONABLE DISTANCE AWAY, THE CONTRACTOR SHALL PROVIDE A TEMPORARY INTERIM CROSSING.

PROPOSED PHASING FOR EUCLID AVE IMPROVEMENTS

1" = 250'



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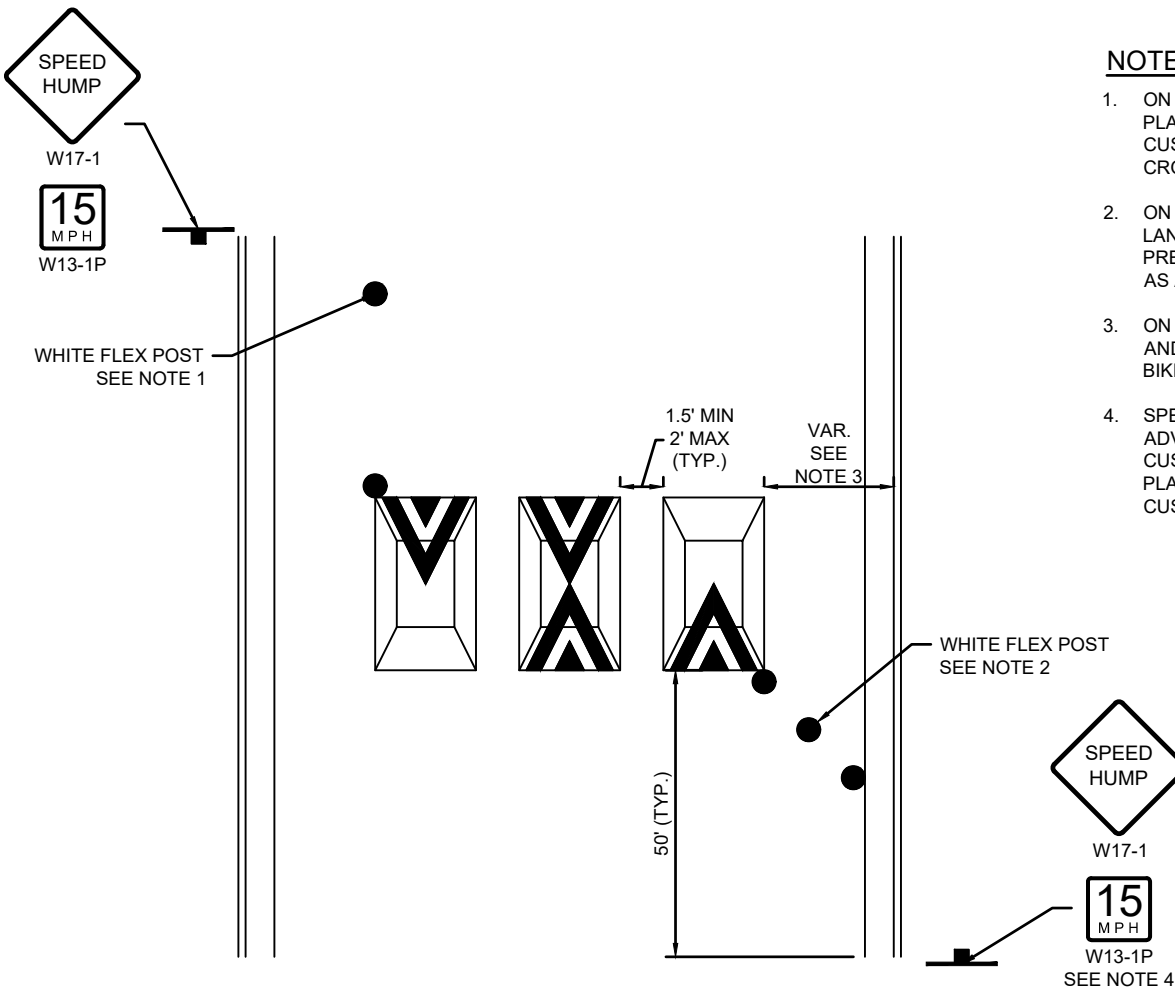
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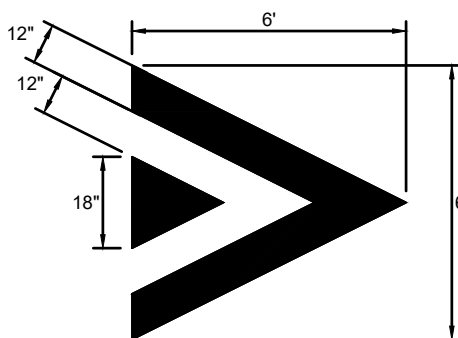
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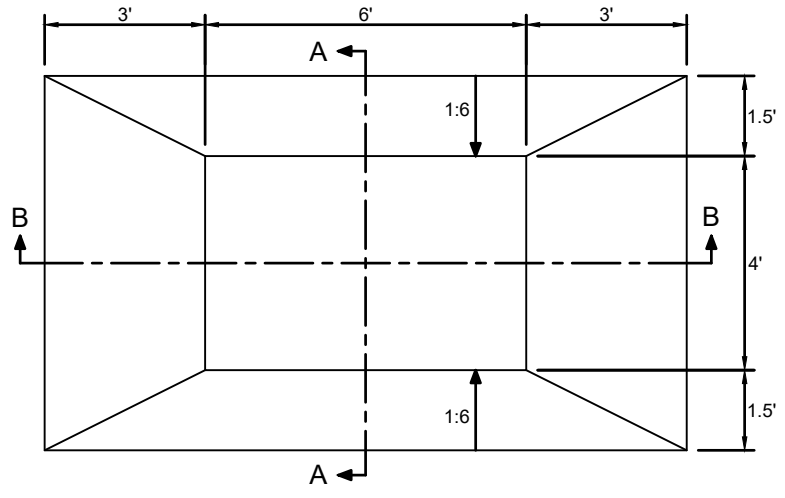
NOTE

1. ON CORRIDORS WITH BIKE LANES, FLEX POSTS SHOULD BE PLACED ON THE APPROACH STARTING 50' PRIOR TO SPEED CUSHIONS AT 10' SPACING, AVOIDING DRIVEWAYS, CROSSINGS, AND OTHER ACCESSES.
2. ON CORRIDORS WITH ON-STREET PARKING BUT NO BIKE LANES, FLEX POSTS SHOULD BE PLACED IN A WAY TO PREVENT VEHICLES FROM BYPASSING SPEED CUSHIONS, AS APPROVED BY THE CITY ENGINEER.
3. ON CORRIDORS WITH BIKE LANES, SPEED CUSHION WIDTH AND SPACING SHALL BE DESIGNED TO NOT EXTEND INTO BIKE LANE.
4. SPEED HUMP SIGN SHOULD BE SUPPLEMENTED WITH ADVISORY SPEED PLAQUE. IF A SERIES OF SPEED CUSHIONS EXISTS IN CLOSE PROXIMITY, ADVISORY SPEED PLAQUE MAY BE ELIMINATED ON ALL BUT THE FIRST SPEED CUSHION IN THE SERIES.

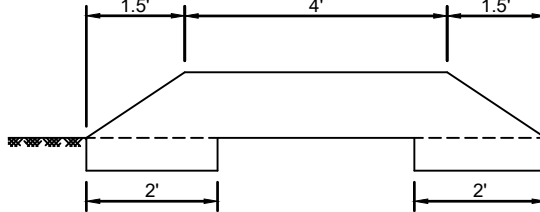
PAVEMENT MARKING DETAIL



CUSHION PLAN VIEW

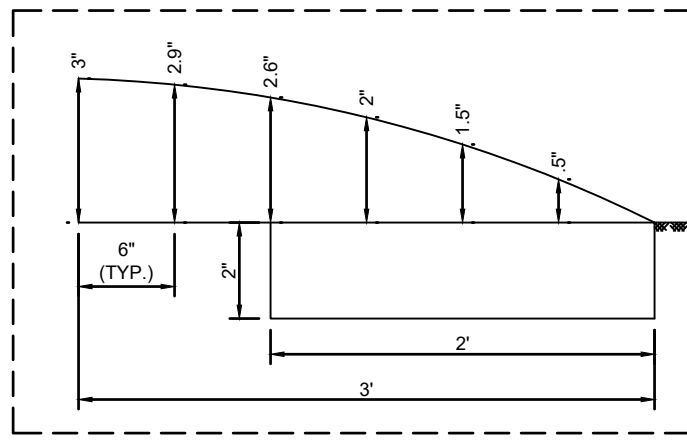
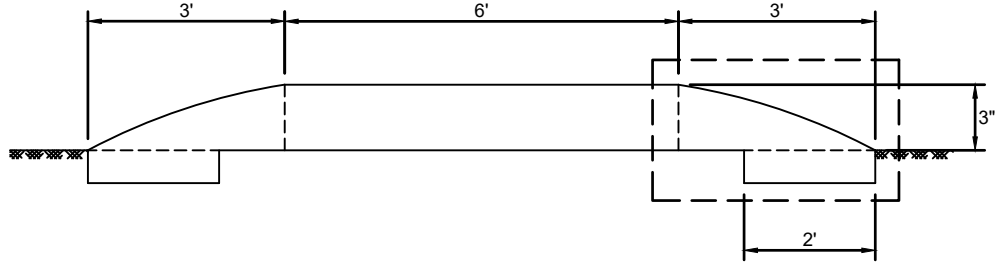


SECTION A-A



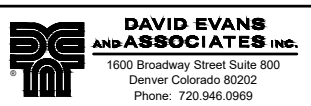
EXISTING GRADE (TYP.)

SECTION B-B



DIMENSIONS IN DETAIL ABOVE ONLY APPLICABLE TO CONCRETE AND ASPHALT SPEED CUSHIONS

SPEED CUSHION



LITTLETON TRAFFIC CALMING
DESIGN GUIDANCE

SHEET
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