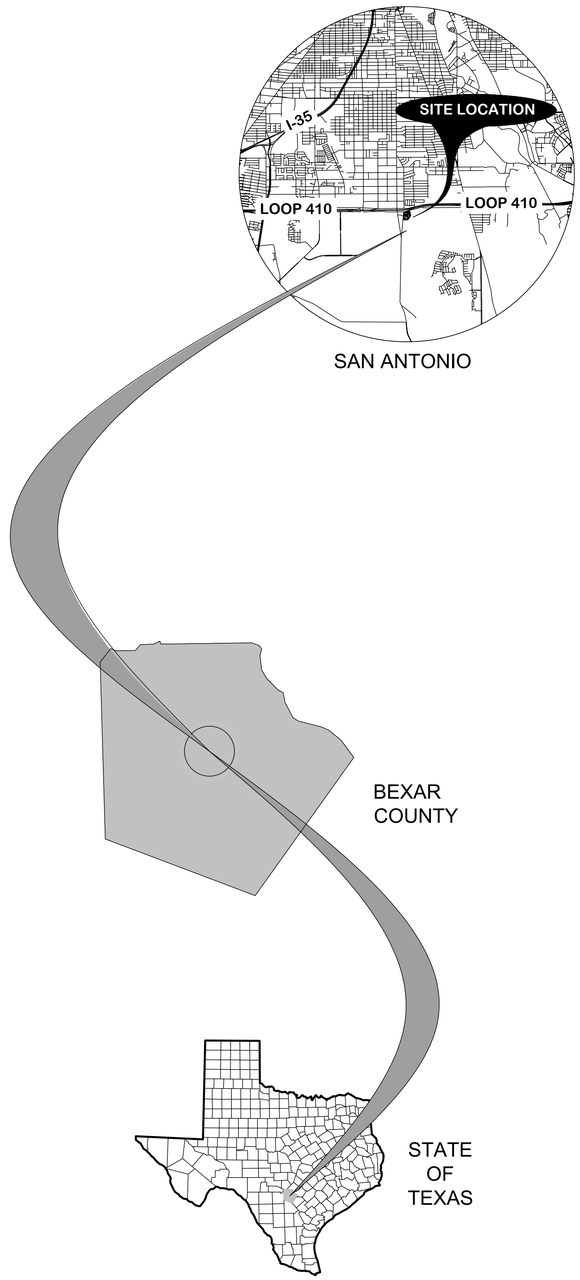
CONSTRUCTION DOCUMENTS

FOR THE DEVELOPMENT OF

SAPD ACADEMY TRACK PAVEMENT

SITUATED WITHIN THE COUNTY OF BEXAR, TEXAS
OCTOBER 2024



SAPD ACADEMY TRACK
N.T.S.

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STATE OF TEXAS
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10/18/2024

2 ADDENDUM NO. 2 - 9/9/25

C0.0

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.
6. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
8. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
9. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION: SAN ANTONIO WATER SYSTEM (SAWS) 233-2010 BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET) 354-6538 / 357-5741 COSA DRAINAGE 207-8048 COSA SIGNAL OPERATIONS 207-7720 / 207-7765 TEXAS STATE WIDE ONE CALL LOCATOR 1-800-344-8377 - CITY PUBLIC SERVICE ENERGY - TIME WARNER - AT&T - MCI
11. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
12. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
13. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
14. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.
15. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY. IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT. IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
16. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND / OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND / OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL. THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.
17. CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.
18. CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

TREE PROTECTION ND PRESERVATION GENERAL NOTES

18. NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
19. TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).
20. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
21. ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
22. ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).
23. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.
24. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. ROOT PROTECTION ZONE IS 1 FOOT OF RADIUS PER INCH OF TREE'S DIAMETER. A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.
25. SAPLINGS, SHRUBS OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.
26. NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.
27. TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI A-300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.
28. NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.
29. ALL DEBRIS GENERATED BY THE PRUNING AND TRIMMING OF THE TREES AND / OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY (NO SEPARATE PAY ITEM).
30. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE, BUT NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
31. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST. (207-0278)
32. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
33. TREE PLANTING FOR MITIGATION OR ENHANCEMENT: ALL PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATION, FERTILIZING, PRUNING AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT. TREES THAT DIE WITHIN TWELVE (12) MONTHS SHALL BE REPLACED WITH A TREE OF EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.
2. WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ALL-WEATHER ACCESS TO THE BUSINESSES AND RESIDENCES. THE TEMPORARY DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.
3. PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.
4. FOR BUSINESSES WITH MORE THAN ONE DRIVEWAY, AT LEAST ONE DRIVEWAY SHALL REMAIN OPEN WHILE THE OTHER NEW DRIVEWAY APPROACHES ARE CONSTRUCTED. FOR BUSINESSES WITH ONLY ONE DRIVEWAY, THE NEW DRIVEWAY APPROACH SHALL BE CONSTRUCTED IN HALF WIDTHS, UNLESS A TEMPORARY ASPHALT DRIVEWAY IS FIRST INSTALLED AT NO SEPARATE COST TO THE CITY.

SLAY ARCHITECTURE

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No. 9, 44379
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10/18/2024

100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C1.0

GENERAL NOTES

ADDITIONAL GENERAL NOTES:

1.0 CONTRACTOR REGULATIONS

1.1 **SPECIFICATIONS -** ALL PHASES OF WORK UNDER THIS CONTRACT SHALL BE WITH STRICT ADHERENCE TO THE ACCOMPANYING SPECIFICATIONS AND THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION" PUBLISHED BY THE CITY OF SAN ANTONIO. WHERE DIFFERENCES OCCUR BETWEEN THESE TWO DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL APPLY. FINAL DECISIONS OR JUDGMENTS ON INTERPRETATION OF THE SPECIFICATIONS AND/OR ON MATTERS NOT SPECIFICALLY COVERED BY THE ABOVE DOCUMENTS SHALL BE MADE BY THE ENGINEER.

1.2. **CODE COMPLIANCE -** CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO. BUILDING CODE AND REGULATIONS, AS WELL AS OTHER SAFETY CODES AND INSPECTION PROVISIONS APPLICABLE TO THIS PROJECT.

1.3 **PERMITS -** CONTRACTOR SHALL SECURE ALL PERMITS REQUIRED FOR CONSTRUCTION AND SHALL NOTIFY ALL RESPECTIVE GOVERNMENTAL OR UTILITY AGENCIES AFFECTED BY CONSTRUCTION. THE CITY WILL PAY THE OUTSTANDING PERMIT FEES CURRENTLY DUE (FENCE, RETAINING WALL, AND SITEWORK PERMITS) DIRECTLY. THE CONTRACTOR SHALL PAY FOR ANY ADDITIONAL REQUIRED PERMITS (E.G., TRADE OR CHILD PERMITS) AND MAY REQUEST REIMBURSEMENT FOR THOSE COSTS IN ACCORDANCE WITH THE GENERAL CONDITIONS.

ANY ADDITIONAL PERMIT COSTS THAT MAY ARISE DURING THE COURSE OF THE PROJECT (E.G., TRADE OR CHILD PERMITS) SHALL BE PAID BY THE CONTRACTOR AS REQUIRED TO MAINTAIN PROJECT PROGRESS. THESE COSTS WILL BE ELIGIBLE FOR REIMBURSEMENT BY THE CITY, IN ACCORDANCE WITH ARTICLE II.2.5 OF THE GENERAL CONDITIONS.

1.4 **CONTRACTOR RESPONSIBILITY -** CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

1.5 **WASTE MATERIAL -** ALL WASTE MATERIAL, EXCEPT MILLINGS, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE RIGHT-OF-WAY AND TO PRIVATE PROPERTY WHERE THE CONTRACTOR HAS THE CONSENT OF THE OWNERS. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING NATURAL DRAINAGE COURSES.

1.6 **INCIDENTAL WORK -** NO EXTRA PAY SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.

1.7 **SOIL CONDITIONS -** NO ADDITIONAL PAYMENT SHALL BE MADE FOR ROCK, SAND, GRAVEL, OR OTHER UNSTABLE CONDITIONS ENCOUNTERED IN ANY WORK IMPLIED BY THESE DRAWINGS. THE CONTRACTOR MAY REVIEW THE GEOTECHNICAL REPORT FOR THE PROJECT IN ORDER TO OBTAIN KNOWLEDGE OF THE SUBSURFACE CONDITIONS AS LOCATED IN THE SPECIFICATIONS.

1.8 **EXISTING FEATURES -** PAVEMENTS, CURB, WALK, CONCRETE STRUCTURES THAT ARE WITHIN THE NEW CONSTRUCTION LIMITS THAT ARE TO BE REPLACED SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST. DEMOLITION OF EXISTING FEATURES AS NECESSARY FOR THE CONSTRUCTION OF NEW WORK SHALL NOT BE CONSIDERED AS EXTRA. DEMOLITION WORK AS REQUIRED SHALL BE SUBSIDIARY TO THE NEW CONSTRUCTION WORK.

1.9. **CONSTRUCTION STAKING -** ALL CONSTRUCTION STAKING AND BENCHMARK TRANSFERS SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

2.0. UTILITIES

2.1 **ABOVE GROUND UTILITIES -** EXISTING ABOVE GROUND UTILITIES HAVE BEEN PLOTTED BY DIRECT FIELD INVESTIGATION.

2.2 **RESPONSIBILITY FOR UTILITIES -** CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON DRAWINGS. DEAD UTILITY LINES SHALL BE SUITABLY CAPPED AT THE LIMITS OF THE PROJECT. ANY EXISTING SITE IMPROVEMENT OR UTILITY REMOVED, DAMAGED OR UNDERCUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE CITY OR RESPECTIVE UTILITY AT THE CONTRACTOR'S EXPENSE.

2.3 **ABANDONED UTILITIES -** ALL ABANDONED UTILITIES WITHIN THE LIMITS OF THE PROJECT SHALL BE REMOVED AND DISPOSED OF LEGALLY BY THE CONTRACTOR.

2.4 **GAS VALVES -** DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

2.5 **UTILITY LOCATES -** CONTRACTOR SHALL CALL FOR UTILITY LOCATES BEFORE BEGINNING ANY EXCAVATION: 1-800-344-8377 OR 811.

3.0 CONSTRUCTION MATERIALS

3.1 **CONCRETE -** CONCRETE SHALL BE CLASS "A" ACCORDING TO ITEM 300 OF THE CITY'S STANDARD SPECIFICATIONS WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE SPECIFIED ON PLANS.

3.2 **REINFORCING STEEL -** REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL HAVE DEFORMATIONS CONFORMING TO ASTM A-615 AND SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:

A-615.....GRADE 40.....#3 BARS AND DOWELS
A-185.....WELDED WIRE FABRIC
A-615.....GRADE 60.....ALL OTHER REINFORCING

ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.

3.3 **REBAR SIZES -** #3 BARS SHALL NOT BE USED ON THIS PROJECT. WALK SHALL BE REINFORCED WITH #4 BARS @ 18" OCBW. DRIVEWAYS SHALL BE REINFORCED WITH #4 BARS @ 12" OCBW, AS A MINIMUM.

3.4 **WIRE WELDED FABRIC -** WELDED WIRE FABRIC SHALL NOT BE USED ON THIS PROJECT.

3.5 **HMAC -** THE HOT MIX ASPHALTIC CONCRETE SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE D, MEETING THE MASTER SPECIFICATIONS REQUIREMENTS OF 2014 TXDOT STANDARD SPECIFICATIONS ITEM 341, COMPACTED TO BETWEEN 92 AND 97 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS MEASURED BY ASTM D 2041.

3.6 **FLEXIBLE BASE -** "FLEXIBLE BASE" SHALL BE TYPE A, GRADE 2, ACCORDING TO TXDOT ITEM 247, COMPACTED TO 95% MODIFIED DENSITY ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR) AND TESTED BY ASTM D-2922 (NUCLEAR METHOD). EXISTING BASE MAY BE REUSED IF MATERIAL MEETS SPECIFICATION REQUIREMENTS.

3.7 **ASPHALT TREATED BASE -** ASPHALT TREATED BASE SHALL MEET THE REQUIREMENTS OF 2014 TXDOT STANDARD SPECIFICATIONS (ITEM 344, GRADE 1 OR 2). THE MATERIAL SHALL BE COMPACTED TO AT LEAST 96 PERCENT OF THE MAXIMUM MOLDED GYRATORY DENSITY DETERMINED IN ACCORDANCE WITH TEX 126 E.

3.8 **6" LIME TREATED SUBGRADE -** 6" LIME TREATED SUBGRADE SHALL BE MODIFIED WITH HYDRATED LIME IN ACCORDANCE WITH 2014 TXDOT STANDARD SPECIFICATIONS (ITEM 2.60), AT 24 POUNDS PER HYDRATED LIME PER SQUARE YARD FOR A 6-INCH TREATMENT DEPTH. HOWEVER, THE ACTUAL PERCENTAGE SHALL BE DETERMINED BY LABORATORY TESTS ON SAMPLES OF CLAY SUBGRADE PRIOR TO CONSTRUCTION. 6" LIME TREATED SUBGRADE SHALL BE COMPACTED TO 95% DENSITY ACCORDING TO ASTM D-698 AT A MOISTURE CONTENT RANGING FROM OPTIMUM AND 4 PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT, AND TESTED BY ASTM D-2922 (NUCLEAR METHOD).

3.9 **PRIME COAT -** "PRIME COAT" SHALL BE MC-30 APPLIED AT A RATE OF 0.2 GAL. /S.Y. MAXIMUM.

3.10 **TACK COAT -** "TACK COAT" SHALL BE RC-250 APPLIED AT A RATE OF 0.1 GAL./S.Y. MAXIMUM.

4.0 GRADING

4.1. **MATCH EXISTING -** "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY VERTICAL AND HORIZONTAL ALIGNMENT.

4.2 **ELEVATION VERIFICATION -** CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. TEMPORARY BENCHMARKS MIGHT BE MOVED OR DAMAGED DURING CONSTRUCTION; THEREFORE, TWO OR MORE TEMPORARY BENCHMARKS SHALL BE BACK SIGHTED TO VERIFY HEIGHT-OF-INSTRUMENT. THE START OF CONSTRUCTION BY THE CONTRACTOR SIGNIFIES THAT EXISTING SITE CONDITIONS HAVE BEEN VERIFIED AND ACCEPTED. ALL CONSTRUCTION STAKING AND BENCHMARK TRANSFERS SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

4.3 **ELEVATION TOLERANCES -** THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE GRADING ELEVATIONS ACCORDING TO THE FOLLOWING TOLERANCES:

PAD ELEVATIONS	± 0.10	FOOT
PAVEMENT	± 0.05	FOOT
CURBS, GUTTERS, AND ALL DRAINAGE FACILITIES	± 0.02	FOOT
LANDSCAPING	± 0.10	FOOT

IF ANY ABOVE MENTIONED ELEVATION IS FOUND TO BE OUT OF LEVEL BEYOND THE STATED TOLERANCE AFTER CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL RETURN AND CORRECT THE GRADING AT NO COST TO THE OWNER. ALL

EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

4.4 **LIFTS -** ALL STRUCTURAL FILL (FILL THAT PROVIDES LOAD BEARING SUPPORT) SHALL BE PLACED ON PREPARED SURFACES IN LIFTS NOT TO EXCEED EIGHT INCHES (8") LOOSE MEASURE, WITH COMPACTED THICKNESS NOT TO EXCEED SIX INCHES (6").

4.5 **COMPACTION -** ALL SELECT STRUCTURAL FILL SHALL BE MOISTURE CONDITIONED TO BETWEEN MINUS TWO (-2) AND PLUS FOUR (+3) PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT, AND THEN COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D 1557.

4.6 **PLASTICITY -** IF SOILS ARE TO BE IMPORTED FOR GRADE ADJUSTMENTS, THE SOILS SHALL NOT HAVE A PLASTICITY INDEX GREATER THAN 20 PERCENT.

4.7 **SOIL QUALITY -** THE SELECT FILL SOILS SHALL BE FREE OF ORGANIC MATERIAL AND DEBRIS AND SHALL NOT CONTAIN STONES LARGER THAN THREE INCHES (3") IN DIAMETER OR WIDTH.

5.0 CONSTRUCTION ITEMS

5.1 **DIMENSIONAL TIES -** DIMENSIONAL TIES TO CURB LINES ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.

5.2 **TYPE A BEDDING -** TYPE A BEDDING SHALL BE USED FOR RIGID PIPE, I.E., CLAY, CONCRETE, DUCTILE IRON, CAST IRON AND PRESTRESSED CYLINDER PIPE UNDER STABLE TRENCH CONDITIONS.

5.3 **EXISTING FEATURES -** DRIVEWAYS, WALKS, RETAINING WALLS AND ASPHALT PAVEMENT OR ANY OTHER EXISTING FEATURE SHALL BE DEMOLISHED AND REMOVED WHERE NECESSARY FOR NEW CONSTRUCTION. VERIFY DEMOLITION WITH ENGINEER PRIOR TO BEGINNING DEMOLITION.

6.0 ALL CONTACTS

6.1 **ENGINEER -** CONTRACTOR SHALL CONTACT THE ENGINEER AT 210-734-4388 AT LEAST 48 HOURS PRIOR TO BEGINNING WORK FOR WHICH THE SITE VISIT IS DESIRED. COORDINATE ALL MATERIAL TESTING WITH THE OWNERS HIRED TESTING COMPANY.

7.0 MISCELLANEOUS

7.1 **CONSTRUCTION SIGNAGE -** BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND GENERALLY BE LOCATED TO AFFORD MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE SIGNS SHALL BE COORDINATED WITH SEQUENCE OF CONSTRUCTION AND DETOUR PLAN. DURING THE PROGRESS OF THE WORK THE CONTRACTOR SHALL PROVIDE ACCESS FOR LOCAL TRAFFIC. TRAFFIC SIGNS SHALL BE REMOVED AND REPLACED IN KIND WITH NEW POST AND SIGNS.

7.2 **PAVEMENT MARKINGS -** STRIPING SHALL BE USED TO INDICATE PARKING SPACES, NO-PARKING AREAS, AND CROSSWALKS. PARKING SPACES SHALL BE INDICATED BY FOUR INCH (4") PAINTED WHITE STRIPES, NINE FEET (9') ON CENTER. NO-PARKING AREAS SHALL BE NOTED BY 4 INCH WHITE LINES WITH TWENTY-FOUR INCHES (24") SEPARATION, PAINTED DIAGONALLY ACROSS THE AREA. STOP LIMIT LINES SHALL BE 2 FEET WIDE, WHITE STRIPES, PERPENDICULAR TO TRAFFIC LANES.

8.0 CONSTRUCTION YARD

8.1 **CONSTRUCTION YARD -** CONTRACTOR SHALL VERIFY WITH OWNER ABOUT USE OF SITE AS CONSTRUCTION YARD. SITE MUST BE RETURNED TO PRE-CONSTRUCTION CONDITIONS OR BETTER.

SLAY ARCHITECTURE

SAN ANTONIO
123 Altgelt Avenue
San Antonio, Texas 78201
T: 210.736.3009

LAREDO
9901 McPherson Avenue, #104
Laredo, Texas 78045
T: 956.791.0405

STATE OF TEXAS
MICHAEL M. SLAY
44379
REGISTERED
PROFESSIONAL ENGINEER
10/18/2024

100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date: 8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C1.1

ADDITIONAL GENERAL NOTES

I. STORMWATER POLLUTION PREVENTION–CLEAN WATER ACT SECTION 402

Texas Pollutant Discharge Elimination System (TPDES) TXR 150000: Stormwater Discharge Permit or Construction General Permit (CGP) required for projects with 1 or more acres distrubed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 540.
List MS4 Operator(s) that may recieve discharges from this project. They may need to be notified prior to construction activities.

☐ No Action Required ☒ Required Action

Action No.

1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000.
2. Comply with the Storm Water Pollution Prevention Plan (SW3P) and revise when necessary to control pollution or required by the Engineer.
3. Post Construction Site Notice (CSN) with SW3P information on or near the site, accessible to the public and Texas Commission on Environmental Quality (TCEQ), Environmental Protection Agency (EPA) or other inspectors.
4. SW3P inspections shall be conducted by a P.E. or a certified stormwater inspector . [see COSA Ordinance No. 019–02–14–0123, Sec. 34–805(q)].
5. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, Contractor shall submit Notice of Intent (NOI) to TCEQ and the COSA Inspector.

Note: If amount of soil disturbance changes, permit requirements may change.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

US Army Corps of Engineers (USACE) Permit required for filling, dredging, excavating or other work in any potential USACE jurisdictional water, such as, rivers, creeks, streams, or wetlands.

The Contractor shall adhere to all of the terms and conditions associated with the following permit(s):

☒ No Permit Required
☐ Nationwide Permit (NWP) 14 – Pre–construction Notice (PCN) not Required
☐ Nationwide Permit 14 – PCN Required
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required: NWP# _____

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices (BMPs) planned to control erosion, sedimentation and post–project total suspended solids (TSS).

1.

2.

3.

4.

401 Best Management Practices: (Not applicable if no USACE permit)

Erosion	Sedimentation	Post–Construction TSS
☐ Temporary Vegetation	☒ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☒ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☐ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	☐ Sedimentation Chambers
		☐ Grassy Swales

III. CULTURAL RESOURCES

Cultural resources fall under the Antiquities Code of Texas and/or the National Historic Preservation Act, as amended in 1966. If a previously unidentified archeological site is encountered during construction work, activities in the vicinity shall be stopped immediately and the City Archeologist (210–207–5421) and/or the SHPO notified.

☐ No Action Required ☒ Required Action

Action No.

1. If a historic resource (concrete stamp, carriage block, metal fixture, tile, masonry, etc.) is found that is not in the plans or has not been previously assessed, contact the Office of Historic Preservation immediately at (210)–207–0035.

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical. Contractor must adhere to Construction Specification Requirements Specs 162,164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

☐ No Action Required ☒ Required Action

Action No.

1. Ensure that a tree permit is in place for this project, if required.
2. Follow the tree preservation/mitigation plan provided in the design plan set. If there are any questions or concerns, please contact the City Arborist at (210)–207–0278, before any work begins.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

☐ No Action Required ☒ Required Action

Action No.

1. MIGRATORY BIRD NESTS: Schedule construction activities as needed to meet the following requirements:

   A. Do not remove or destroy any active migratory bird nests (nests containing eggs and/or flightless birds) at any time of year. If there are any active nests, they shall not be removed until the nests become inactive.

   B. On/in structures, if there are any active nests, they shall not be removed until all nests become inactive. After inactive nests are removed and/or before nest activity begins, deterrent materials may be applied to the structures to prevent future nest building.

2. Deterrent material should be placed (and maintained) after October 1 or before February 15.
3. The preferred nesting season for migratory birds is from February 15 through October 1. When practicable, schedule construction operations outside of the preferred nesting season.
4. If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the COSA Inspector immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the COSA Inspector immediately.
5. If any sensitive feature (caves, subsurface voids, etc.) is discovered during construction, all construction activities near the sensitive feature must be suspended immediately. The Construction Inspector shall be immediately notified of any sensitive features encountered during construction. The construction activities near the sensitive feature may not proceed until a US Fish and Wildlife Service (USFWS) permitted biologist has assessed the site for evidence of habitat or listed endangered species. If it is determined that endangered species or their habitat is present within the void space, consultations with the USFWS will commence and work within the immediate vicinity of the sensitive feature will not be allowed to proceed until USFWS approval has been received.

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropiate for any hazardous materials used.

Obtain and keep on–site Safety Data Sheets (SDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on–site spill response materials, as indicated in the SDS. In the event of a spill, take actions to mitigate the spill as indicated in the SDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the COSA Inspector if any of the follwing are detected:

* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canister, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Hazardous Materials or Contamination Issues Specific to this Project:

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

Does the project involve the demolition of a span bridge?

☐ Yes ☒ No (No further action required)

If "Yes", a pre– demolition notification must be submitted to the Texas Department of State Health Services. The contractor shall contact TxDOT's Project Engineer 25 calendar days prior to the demolition of the bridges(s) on the project to assist with the notification.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

SAPD ACADEMY
TRACK IMPROVMENTS

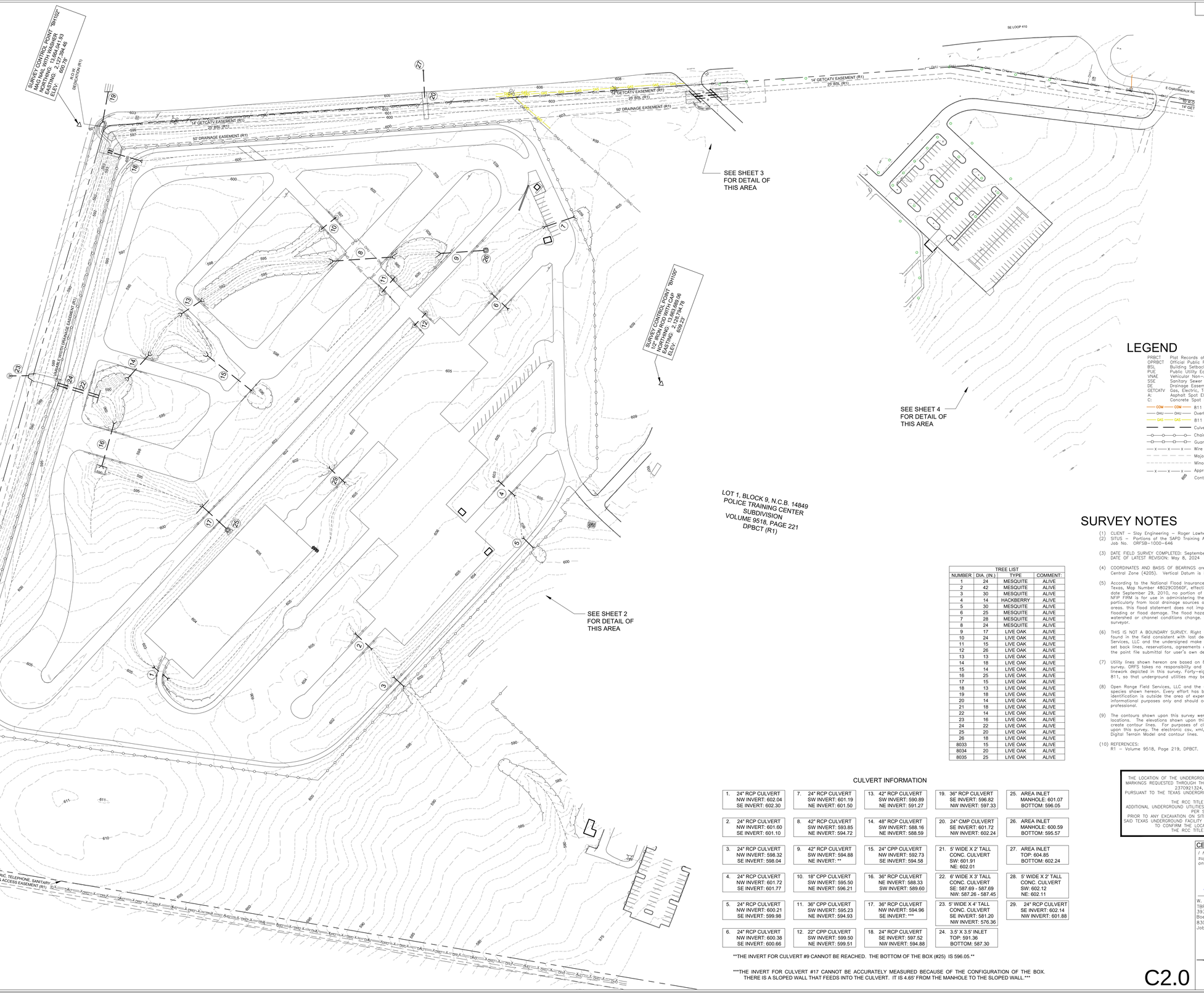
Texas Department of Transportation
San Antonio District Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS

EPIC

FILE: epic 2015–10–09 SAT.dgn	DN: TxDOT	CK: TxDOT	DW: BW	CK: GAG
©TxDOT OCTOBER 2015	CONT	SECT	JOB	HIGHWAY
SHEET NO. C1.2	DIST	COUNTY		REVISIONS

TOPOGRAPHIC SURVEY



LEGEND

PRBCT	Plat Records of Bexar County, Texas
OPRBCT	Official Public Records of Bexar County, Texas
BSL	Building Setback Line
PUE	Public Utility Easement
VNAE	Vehicular Non-Access Easement
SSE	Sanitary Sewer Easement
DE	Drainage Easement
GETCATV	Gas, Electric, Telephone and Cable TV Easement
A:	Asphalt Spot Elevation
C:	Concrete Spot Elevation
COM — COM	811 designated Communications Line
OHU — OHU	Overhead Utilities
GAS — GAS	811 designated Gas Line
	Culvert as noted
	Chainlink Fence
	Guardrail
x — x — x	Wire Fence
	Major Contour
	Minor Contour
x — x — x	Approximate Right-of-Way (see Survey Note 6)
600	Contour Label
EM	Electric Meter
GM	Gas Meter
	Tree
CATV	Cable Box
	Fire Hydrant
	Light Post
	Sign
	Gas Valve
	Water Valve
	Vault–Unidentified
	Storm Sewer Manhole
WM	Water Meter
	Power Pole
	Guy Wire

TREE LIST			
NUMBER	DIA. (IN.)	TYPE	COMMENT:
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4	14	HACKBERRY	ALIVE
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10	24	LIVE OAK	ALIVE
11	15	LIVE OAK	ALIVE
12	26	LIVE OAK	ALIVE
13	13	LIVE OAK	ALIVE
14	18	LIVE OAK	ALIVE
15	14	LIVE OAK	ALIVE
16	25	LIVE OAK	ALIVE
17	15	LIVE OAK	ALIVE
18	13	LIVE OAK	ALIVE
19	18	LIVE OAK	ALIVE
20	14	LIVE OAK	ALIVE
21	18	LIVE OAK	ALIVE
22	14	LIVE OAK	ALIVE
23	16	LIVE OAK	ALIVE
24	22	LIVE OAK	ALIVE
25	20	LIVE OAK	ALIVE
26	18	LIVE OAK	ALIVE
8033	15	LIVE OAK	ALIVE
8034	20	LIVE OAK	ALIVE
8035	25	LIVE OAK	ALIVE

CULVERT INFORMATION

1. 24" RCP CULVERT
NW INVERT: 602.04
SE INVERT: 602.30

2. 24" RCP CULVERT
NW INVERT: 601.60
SE INVERT: 601.10

3. 24" RCP CULVERT
NW INVERT: 598.32
SE INVERT: 598.04

4. 24" RCP CULVERT
NW INVERT: 601.72
SE INVERT: 601.77

5. 24" RCP CULVERT
NW INVERT: 600.21
SE INVERT: 599.98

6. 24" RCP CULVERT
NW INVERT: 600.38
SE INVERT: 600.66

7. 24" RCP CULVERT
SW INVERT: 601.19
NE INVERT: 601.50

8. 42" RCP CULVERT
SW INVERT: 593.85
NE INVERT: 594.72

9. 42" RCP CULVERT
SW INVERT: 594.88
NE INVERT: **

10. 18" CPP CULVERT
SW INVERT: 595.50
NE INVERT: 596.21

11. 36" CPP CULVERT
SW INVERT: 595.23
NE INVERT: 594.93

12. 22" CPP CULVERT
SW INVERT: 599.50
NE INVERT: 599.51

13. 42" RCP CULVERT
SW INVERT: 590.89
NE INVERT: 591.27

14. 48" RCP CULVERT
SW INVERT: 588.16
NE INVERT: 588.59

15. 24" CPP CULVERT
NW INVERT: 592.73
SE INVERT: 594.58

16. 36" RCP CULVERT
NE INVERT: 588.33
SW INVERT: 589.60

17. 36" RCP CULVERT
NW INVERT: 594.96
SE INVERT: ***

18. 24" RCP CULVERT
SE INVERT: 597.52
NW INVERT: 594.88

19. 36" RCP CULVERT
SE INVERT: 596.82
NW INVERT: 597.33

20. 24" CMP CULVERT
SE INVERT: 601.72
NW INVERT: 602.24

21. 5' WIDE X 2' TALL CONC. CULVERT
SW: 601.91
NE: 602.01

22. 6' WIDE X 3' TALL CONC. CULVERT
SE: 587.69 - 587.69
NW: 587.26 - 587.45

23. 5' WIDE X 4' TALL CONC. CULVERT
SE INVERT: 581.20
NW INVERT: 576.36

24. 3.5' X 3.5' INLET
TOP: 591.36
BOTTOM: 587.30

25. AREA INLET
MANHOLE: 601.07
BOTTOM: 596.05

26. AREA INLET
MANHOLE: 600.59
BOTTOM: 595.57

27. AREA INLET
TOP: 604.85
BOTTOM: 602.24

28. 5' WIDE X 2' TALL CONC. CULVERT
SW: 602.12
NE: 602.11

29. 24" RCP CULVERT
SE INVERT: 602.14
NW INVERT: 601.88

THE INVERT FOR CULVERT #9 CANNOT BE REACHED. THE BOTTOM OF THE BOX (#25) IS 596.05.

THE INVERT FOR CULVERT #17 CANNOT BE ACCURATELY MEASURED BECAUSE OF THE CONFIGURATION OF THE BOX. THERE IS A SLOPED WALL THAT FEEDS INTO THE CULVERT. IT IS 4.65' FROM THE MANHOLE TO THE SLOPED WALL.

SURVEY NOTES

(1) CLIENT – Slay Engineering – Roger Lawhead
(2) SITUS – Portions of the SAPD Training Academy, 12200 SE Loop 410 Access Rd, San Antonio, TX 78214
Job No. ORFSB–1000–646

(3) DATE FIELD SURVEY COMPLETED: September 5, 2023, portions updated on May 7, 2024
DATE OF LATEST REVISION: May 8, 2024

(4) COORDINATES AND BASIS OF BEARINGS are relative to State Plane Coordinate System, NAD 1983, Texas South Central Zone (4205). Vertical Datum is NAVD 1988.

(5) According to the National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) for Bexar County, Texas, Map Number 48029C0560F, effective date September 29, 2010, and Map Number 48029C0580G, effective date September 29, 2010, no portion of this property lies within an area of special flood hazard (SFHA). The NFIP FIRM is for use in administering the NFIP; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside special flood hazard areas. this flood statement does not imply that the property and/or structures located thereon will be free from flooding or flood damage. The flood hazard area is subject to change as detailed studies occur and/or watershed or channel conditions change. This flood statement shall not create liability on the part of the surveyor.

(6) THIS IS NOT A BOUNDARY SURVEY. Right of Way lines shown hereon are based upon minimal monumentation found in the field consistent with last deeds and plats of record found in the public records. Open Range Field Services, LLC and the undersigned make no representations or guarantees pertaining to easements, rights of way, set back lines, reservations, agreements and/or other matters pertaining to title. Monumenation can be found in the point file submittal for user's own determination on reliability.

(7) Utility lines shown hereon are based on 811 designation marks and existing surface features found in the field survey. ORFS takes no responsibility and can make now guarantees as to the accuracy of any underground utility linework depicted in this survey. Forty-eight hours before digging, boring, pile driving, planting, etc. call Texas 811, so that underground utilities may be designated and/or located prior to construction activities.

(8) Open Range Field Services, LLC and the undersigned accepts no responsibility for the identification of the tree species shown hereon. Every effort has been made to properly identify the trees shown hereon, however, tree identification is outside the area of expertise of the signing surveyor. The tree types shown hereon are for informational purposes only and should only be used after confirmation by a certified arborist or other qualified professional.

(9) The contours shown upon this survey were created by interpolation from elevations determined at specific locations. The elevations shown upon this survey represent a portion of the field survey that was used to create contour lines. For purposes of clarity, only minimal elevations observed for this survey have been shown upon this survey. The electronic csv, xml, and Autocad files contain the point data which was used to derive the Digital Terrain Model and contour lines.

(10) REFERENCES:
R1 – Volume 9518, Page 219, DPBCT.

THE LOCATION OF THE UNDERGROUND UTILITIES HEREON WERE LOCATED FROM UTILITY MARKINGS REQUESTED THROUGH THE TEXAS 811 SYSTEM ON 02/28/2023. TICKET NOS. 2370921324, 2370921537, & 2370921848.
PURSUANT TO THE TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT, CHAPTER 251 & THE RCC TITLE 16, TAC, PART 1, CHAPTER 18.
ADDITIONAL UNDERGROUND UTILITIES MAY EXIST WHICH WERE NOT MARKED IN THE FIELD PER SAID TEXAS 811 TICKET.
PRIOR TO ANY EXCAVATION ON SITE, THE EXCAVATOR SHALL SEPARATELY COMPLY WITH SAID TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT, CHAPTER 251, TO CONFIRM THE LOCATION OF ANY UNDERGROUND UTILITY & THE RCC TITLE 16, TAC, PART 1, CHAPTER 18.

CERTIFICATION

I hereby certify this survey was made on the ground under my supervision and that this plat correctly represents the conditions found on the date surveyed.

REVISION 1
May 8, 2024

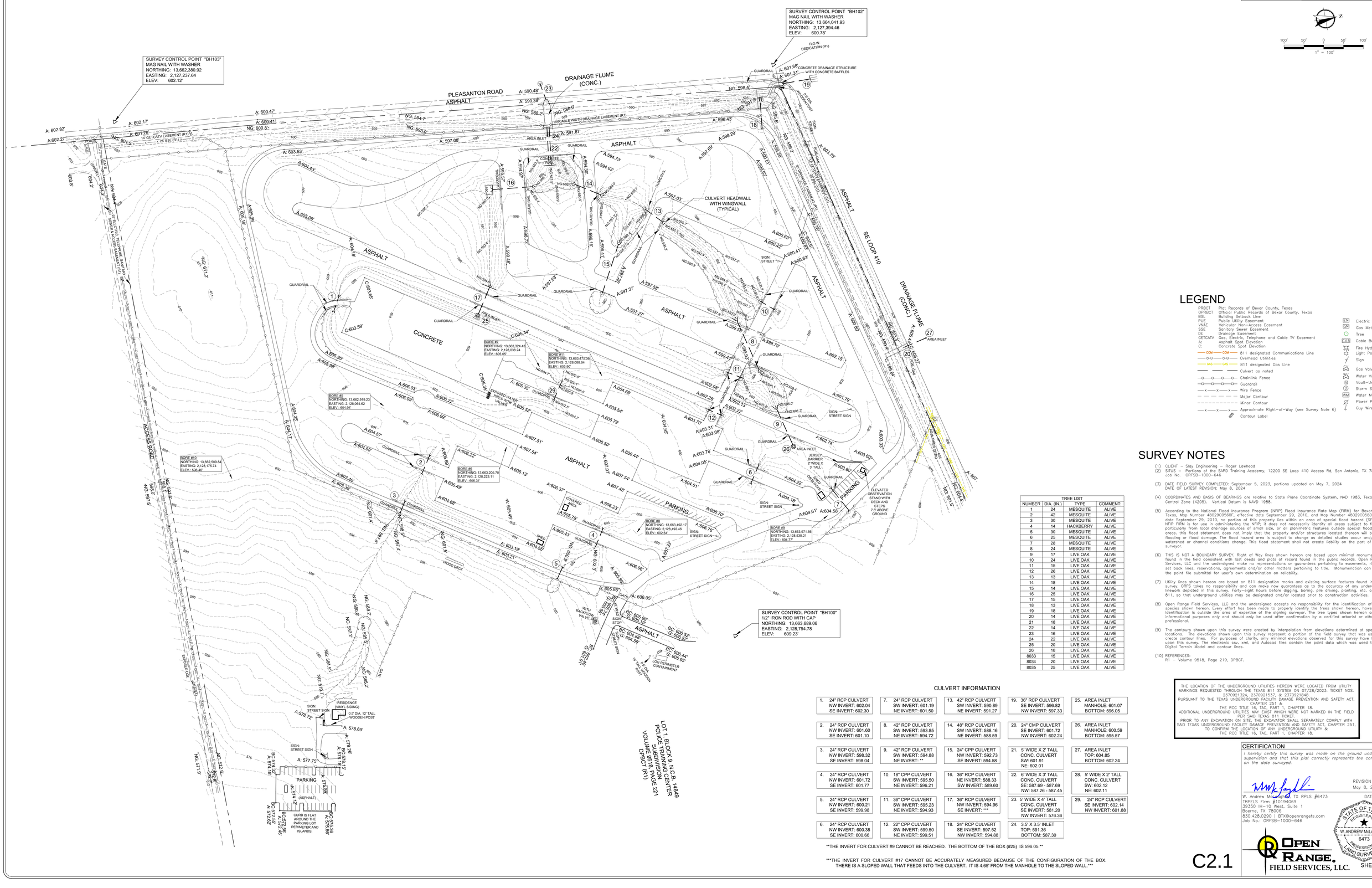
W. Andrew McLaughlin, TX RPLS #6473 — DATE
TBPELS Firm #10194069
19350 IH–10 West, Suite 1
Boerne, TX 78006
830.428.0290 | BTX@openrangefs.com
Job No.: ORFSB–1000–646

STATE OF TEXAS
REGISTERED
W. ANDREW McLAUGHLIN
6473
PROFESSIONAL
LAND SURVEYOR

OPEN RANGE. FIELD SERVICES, LLC.

C2.0

TOPOGRAPHIC SURVEY



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	Culvert as noted		Guy Wire
	Chainlink Fence		
	Guardrail		
	Wire Fence		
	Major Contour		
	Minor Contour		
	Approximate Right–of–Way (see Survey Note 6)		
600	Contour Label		

SURVEY NOTES

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7	28	MESQUITE	ALIVE
8	24	MESQUITE	ALIVE
9	17	LIVE OAK	ALIVE
10	24	LIVE OAK	ALIVE
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12	26	LIVE OAK	ALIVE
13	13	LIVE OAK	ALIVE
14	18	LIVE OAK	ALIVE
15	14	LIVE OAK	ALIVE
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18	13	LIVE OAK	ALIVE
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21	18	LIVE OAK	ALIVE
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26	18	LIVE OAK	ALIVE
8033	15	LIVE OAK	ALIVE
8034	20	LIVE OAK	ALIVE
8035	25	LIVE OAK	ALIVE

CULVERT INFORMATION

1.	24" RCP CULVERT NW INVERT: 602.04 SE INVERT: 602.30	7.	24" RCP CULVERT SW INVERT: 601.19 NE INVERT: 601.50	13.	42" RCP CULVERT SW INVERT: 590.89 NE INVERT: 591.27	19.	36" RCP CULVERT SE INVERT: 596.82 NW INVERT: 597.33	25.	AREA INLET MANHOLE: 601.07 BOTTOM: 596.05
2.	24" RCP CULVERT NW INVERT: 601.60 SE INVERT: 601.10	8.	42" RCP CULVERT SW INVERT: 593.85 NE INVERT: 594.72	14.	48" RCP CULVERT SW INVERT: 588.16 NE INVERT: 588.59	20.	24" CMP CULVERT SE INVERT: 601.72 NW INVERT: 602.24	26.	AREA INLET MANHOLE: 600.59 BOTTOM: 595.57
3.	24" RCP CULVERT NW INVERT: 598.32 SE INVERT: 598.04	9.	42" RCP CULVERT SW INVERT: 594.88 NE INVERT: **	15.	24" CPP CULVERT NW INVERT: 592.73 SE INVERT: 594.58	21.	5' WIDE X 2' TALL CONC. CULVERT SW: 601.91 NE: 602.01	27.	AREA INLET TOP: 604.85 BOTTOM: 602.24
4.	24" RCP CULVERT NW INVERT: 601.72 SE INVERT: 601.77	10.	18" CPP CULVERT SW INVERT: 595.50 NE INVERT: 596.21	16.	36" RCP CULVERT NE INVERT: 588.33 SW INVERT: 589.60	22.	6' WIDE X 3' TALL CONC. CULVERT SE: 587.69 - 587.69 NW: 587.26 - 587.45	28.	5' WIDE X 2' TALL CONC. CULVERT SW: 602.12 NE: 602.11
5.	24" RCP CULVERT NW INVERT: 600.21 SE INVERT: 599.98	11.	36" CPP CULVERT SW INVERT: 595.23 NE INVERT: 594.93	17.	36" RCP CULVERT NW INVERT: 594.96 SE INVERT: ***	23.	5' WIDE X 4' TALL CONC. CULVERT SE INVERT: 581.20 NW INVERT: 576.36	29.	24" RCP CULVERT SE INVERT: 602.14 NW INVERT: 601.88
6.	24" RCP CULVERT NW INVERT: 600.38 SE INVERT: 600.66	12.	22" CPP CULVERT SW INVERT: 599.50 NE INVERT: 599.51	18.	24" RCP CULVERT SE INVERT: 597.52 NW INVERT: 594.88	24.	3.5' X 3.5' INLET TOP: 591.36 BOTTOM: 587.30		

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THE LOCATION OF THE UNDERGROUND UTILITIES HEREON WERE LOCATED FROM UTILITY MARKINGS REQUESTED THROUGH THE TEXAS 811 SYSTEM ON 07/28/2023. TICKET NOS. 2370921324, 2370921537, & 2370921848.
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CERTIFICATION

I hereby certify this survey was made on the ground under my supervision and that this plat correctly represents the conditions found on the date surveyed.

REVISION 1
May 8, 2024

W. Andrew McLaughlin, IV, RPLS #6473
TBPELS Firm #10194069
39350 IH–10 West, Suite 1
Boerne, TX 78006
830.428.0290 | BTX@openrangefs.com
Job No.: ORFSB–1000–646

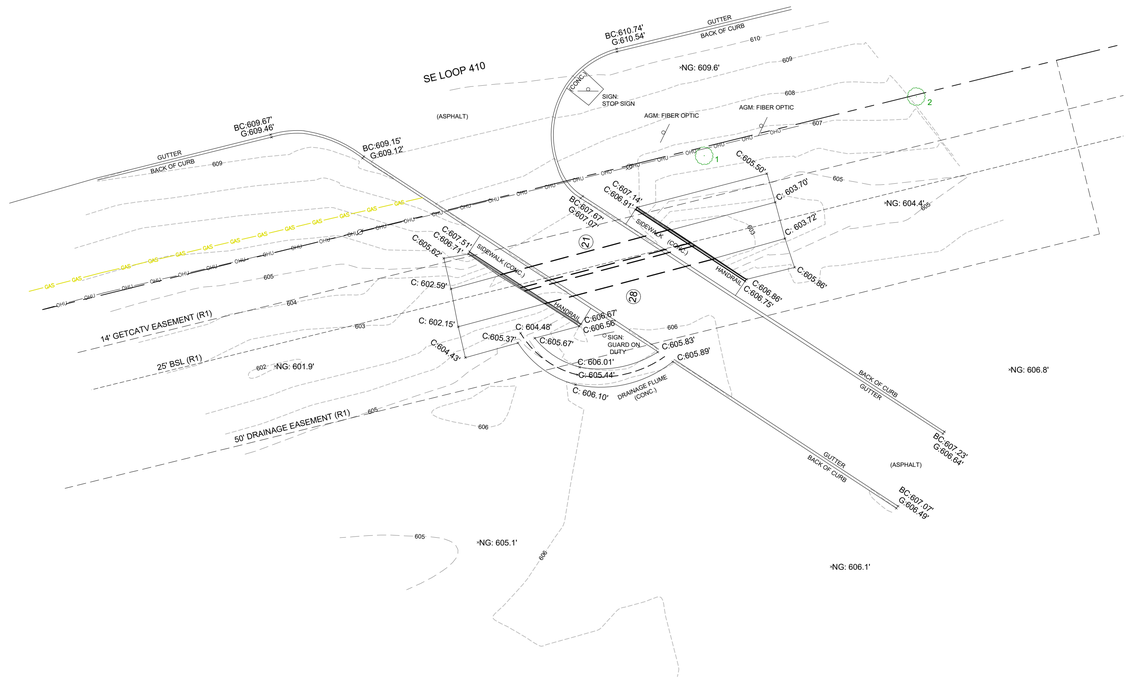
DATE

STATE OF TEXAS REGISTERED W. ANDREW MCLAUGHLIN 6473 PROFESSIONAL LAND SURVEYOR

OPEN RANGE. FIELD SERVICES, LLC.

C2.1

TOPOGRAPHIC SURVEY



LEGEND

PRBCT	Plat Records of Bexar County, Texas
OPRBCT	Official Public Records of Bexar County, Texas
BSL	Building Setback Line
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VNAE	Vehicular Non-Access Easement
SSE	Sanitary Sewer Easement
DE	Drainage Easement
GETCATV	Gas, Electric, Telephone and Cable TV Easement
A:	Asphalt Spot Elevation
C:	Concrete Spot Elevation
COM — COM	811 designated Communications Line
OHU — OHU	Overhead Utilities
GAS — GAS	811 designated Gas Line
	Culvert as noted
	Chainlink Fence
	Guardrail
x — x — x	Wire Fence
	Major Contour
	Minor Contour
x — x — x	Approximate Right-of-Way (see Survey Note 6)
600	Contour Label

EM	Electric Meter
GM	Gas Meter
	Tree
CATV	Cable Box
	Fire Hydrant
	Light Post
	Sign
	Gas Valve
	Water Valve
	Vault–Unidentified
D	Storm Sewer Manhole
WM	Water Meter
	Power Pole
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11	15	LIVE OAK	ALIVE
12	26	LIVE OAK	ALIVE
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14	18	LIVE OAK	ALIVE
15	14	LIVE OAK	ALIVE
16	25	LIVE OAK	ALIVE
17	15	LIVE OAK	ALIVE
18	13	LIVE OAK	ALIVE
19	18	LIVE OAK	ALIVE
20	14	LIVE OAK	ALIVE
21	18	LIVE OAK	ALIVE
22	14	LIVE OAK	ALIVE
23	16	LIVE OAK	ALIVE
24	22	LIVE OAK	ALIVE
25	20	LIVE OAK	ALIVE
26	18	LIVE OAK	ALIVE
8033	15	LIVE OAK	ALIVE
8034	20	LIVE OAK	ALIVE
8035	25	LIVE OAK	ALIVE

SURVEY NOTES

(1) CLIENT – Stay Engineering – Roger Lawhead
(2) SITUS – Portions of the SAPD Training Academy, 12200 SE Loop 410 Access Rd, San Antonio, TX 78214
Job No. ORFSB–1000–646

(3) DATE FIELD SURVEY COMPLETED: September 5, 2023, portions updated on May 7, 2024
DATE OF LATEST REVISION: May 8, 2024

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(10) REFERENCES:
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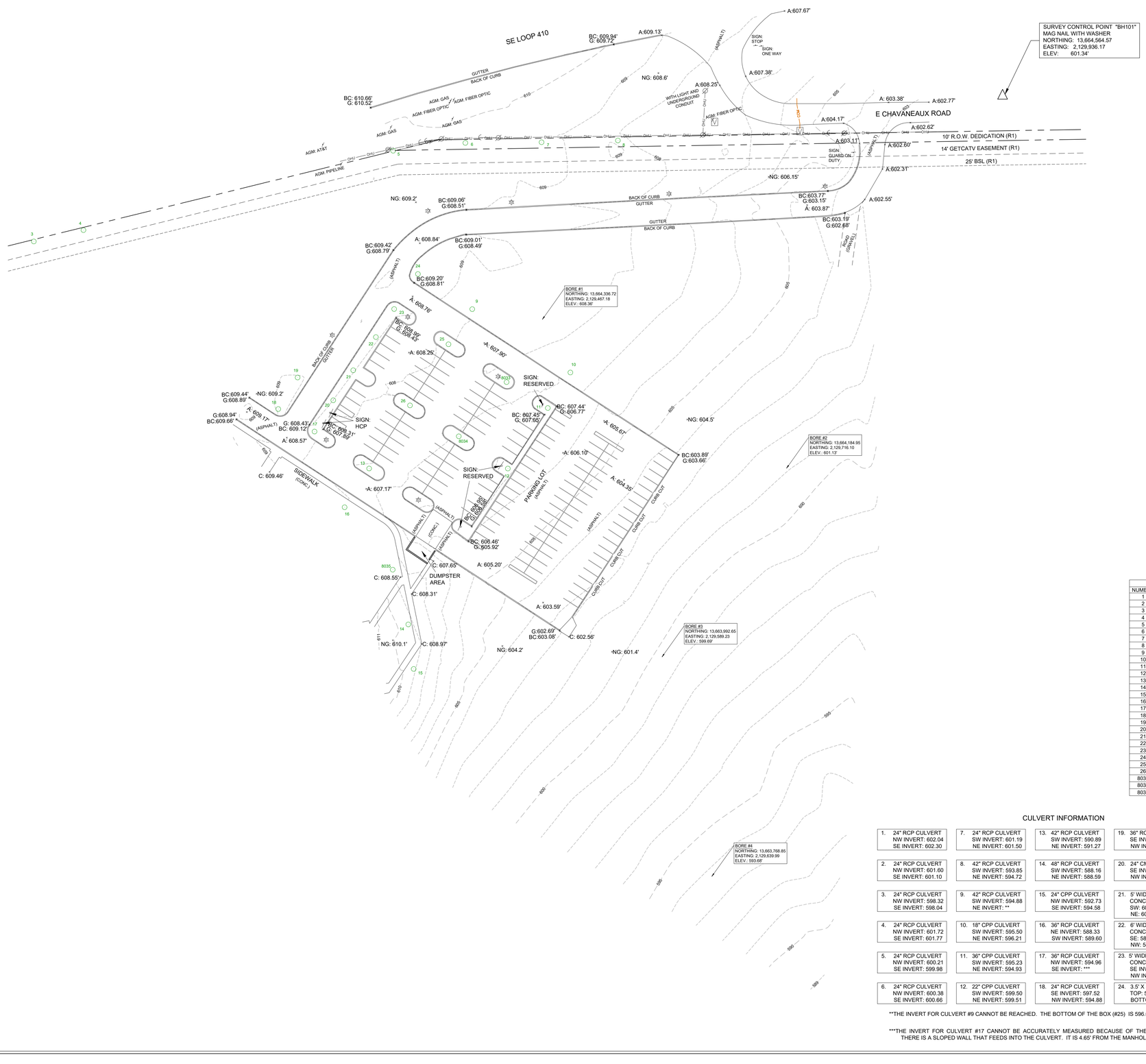
TBPELS Firm #10194069
39350 IH-10 West, Suite 1
Boerne, TX 78006
830.428.0290 | BTX@openrangefs.com
Job No.: ORFSB–1000–646

STATE OF TEXAS · REGISTERED · W. ANDREW MCLAUGHLIN · 6473 · PROFESSIONAL LAND SURVEYOR

OPEN RANGE. FIELD SERVICES, LLC.

C2.2

TOPOGRAPHIC SURVEY



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	Major Contour		
	Minor Contour		
	Approximate Right–of–Way (see Survey Note 6)		
609	Contour Label		

SURVEY NOTES

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(2) SITUS – Portions of the SAPD Training Academy, 12200 SE Loop 410 Access Rd, San Antonio, TX 78214
Job No. ORFSB–1000–646

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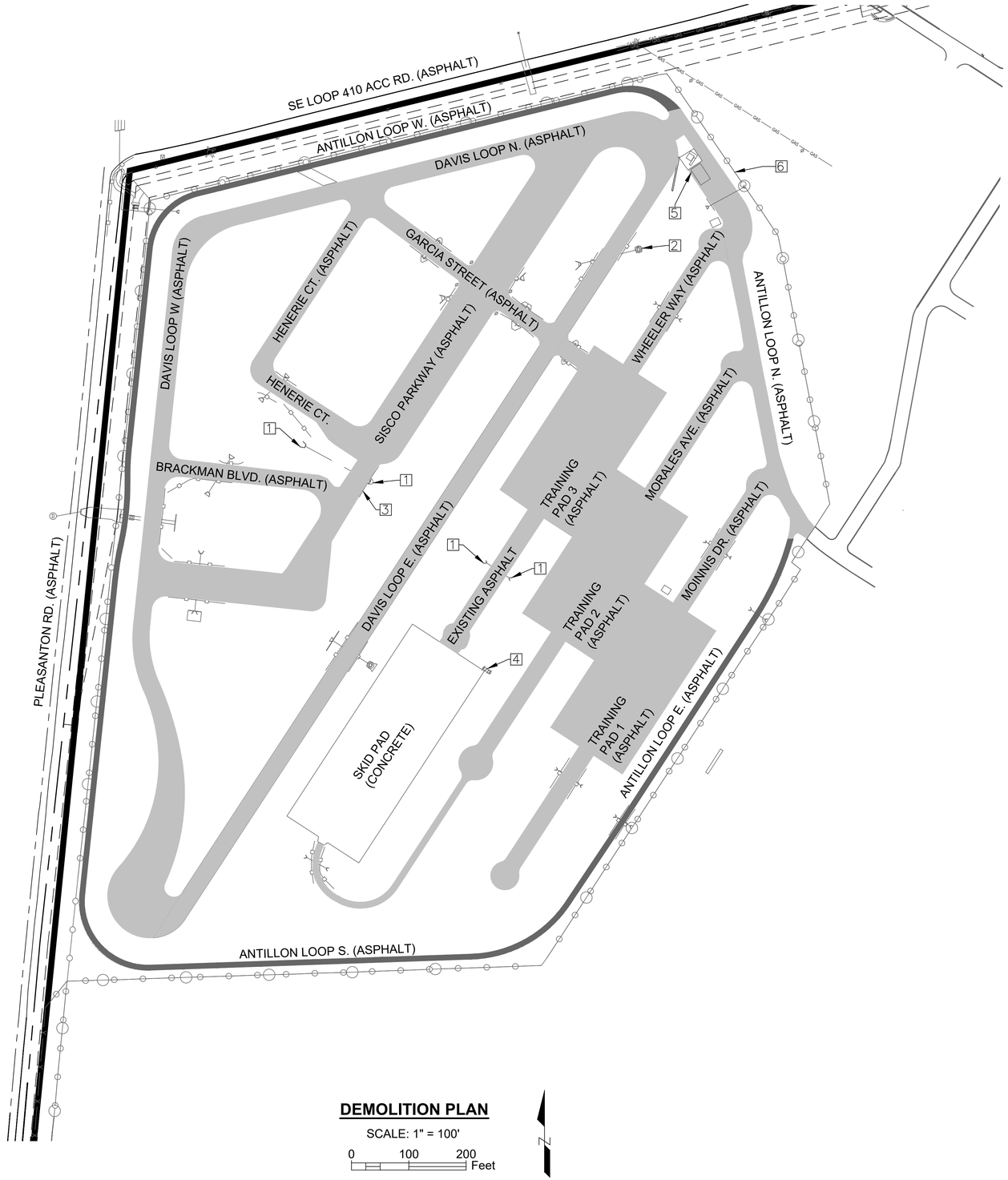
C2.3



DEMOLITION PLAN

SCALE: 1" = 100'

0 100 200 Feet

DEMOLITION NOTES:

1. BIDDERS ARE HEREBY NOTIFIED TO MAKE A THOROUGH REVIEW OF THE JOB SITE AND SOIL BORING INFORMATION PROVIDED BY ENGINEER. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ROCK, SAND, GRAVEL, OR OTHER UNSTABLE CONDITIONS ENCOUNTERED IN ANY WORK IMPLIED BY THESE DRAWINGS.
2. THE CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. STARTING ANY WORK CONSTITUTES THE APPROVAL OF THE EXISTING CONDITIONS SHOWN.
3. THE GENERAL EXTENT OF DEMOLITION WORK IS SHOWN ON THE DRAWINGS. IT IS NOT POSSIBLE TO SHOW REQUIRED DEMOLITION IN EVERY DETAIL. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXTENT OF DEMOLITION WORK, AND TO FAMILIARIZE HIMSELF WITH THE CONDITIONS UNDER WHICH THE WORK SHALL BE PERFORMED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK SHOWN OR REQUIRED AS A RESULT OF WORK SHOWN, OR WORK REQUIRED AS A RESULT OF NEW WORK OR DEMOLITION.
4. DEMOLITION OF STRUCTURES INCLUDES REMOVAL OF THE BUILDING SUPERSTRUCTURE, FOUNDATION, AND ALL ASSOCIATED IN-GROUND AND ABOVE-GROUND UTILITIES.
5. DEMOLITION INCLUDES REMOVAL AND DISPOSAL OF DEMOLISHED MATERIALS. THE CONTRACTOR SHALL PROVIDE DUMPSTER OR OTHER SUITABLE MEANS OF DISPOSAL OF DEMOLISHED MATERIALS AND CONSTRUCTION DEBRIS. DUMPSTER SHALL BE PLACED IN A LOCATION APPROVED BY THE OWNER AND IN ACCORDANCE WITH LOCAL CODES AND REQUIREMENTS.
6. THE CONTRACTOR SHALL REMOVE EXISTING IMPROVEMENTS WITHIN THE LIMITS OF THE SITE, AS REQUIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE SUB-SURFACE UTILITIES THAT WILL NO LONGER REMAIN IN SERVICE.
7. ALL DEMOLISHED MATERIALS, DEBRIS, AND RUBBISH SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
8. THE CONTRACTOR SHALL REPAIR DAMAGE TO ADJACENT AREAS, FACILITIES, UTILITIES, MATERIALS, AND EQUIPMENT DONE BY DEMOLITION AND NEW CONSTRUCTION OPERATIONS, AT NO EXTRA COST TO THE OWNER.
9. WHERE BACKFILLING IS REQUIRED, AS A RESULT OF DEMOLITION, SATISFACTORY BACKFILL MATERIAL SHALL BE PLACED IN MAX EIGHT INCH DEEP LIFTS. EACH LIFT SHALL BE COMPACTED TO 90% OPTIMUM WHEN TESTED IN ACCORDANCE WITH ASTM 1557-D. SEE CIVIL FOR ADDITIONAL SITE FILLING AND COMPACTION REQUIREMENTS. SEE STRUCTURAL FOR REQUIREMENTS UNDER BUILDING FOUNDATIONS.

KEYED NOTES:

[1] EXISTING RCP CULVERT WITH HEADWALL TO BE REMOVED. REMOVE HEADWALL, BRICK CULVERT OPENING AND ABANDON IN PLACE.
[2] EXISTING AREA INLET TO BE REMOVED. REMOVE AND REPLACE CONC. APRON ON THREE SIDES TO PROPOSED ELEVATION. (SEE GRADING PLAN SHEET C8.2)
[3] EXISTING GUARDRAIL TO BE REMOVED.
[4] EXISTING BOLLARDS AND ABOVE GROUND WATER LINES TO BE REMOVED LOCATE, EXPOSE, AND REMOVE WATER LINES BELOW PROPOSED PAVEMENT AREAS. CAP BELOW GROUND WATER LINES IN RECTANGULAR METER BOX WITH BASE (CAST IRON) PER ASTM A48 CLASS 30B.
[5] TEMPORARILY RELOCATE EXISTING SHADED SEATING TO GRASS AREA.
[6] REMOVE ±28LF CHAIN LINK FENCE. SEE DETAIL SHEET C5.1 FOR DETAIL.

LEGEND:

- PROPERTY LINE
- PAVEMENT CENTER LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- EXISTING CHAINLINK FENCE
- E. GAS — E. GAS — EXISTING GAS LINE
- EXISTING FIRE HYDRANT
- EXISTING GUY WIRE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM DRAIN MANHOLE
- EXISTING SIGN
- EXISTING SPRINKLER VALVE
- EXISTING TREE
- EXISTING SHADE STRUCTURE
- MILL & OVERLAY AS REQUIRED
- FULL DEPTH RECONSTRUCTION

SLAY ARCHITECTURE

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10/18/2024

100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C3.0

DEMOLITION PLAN

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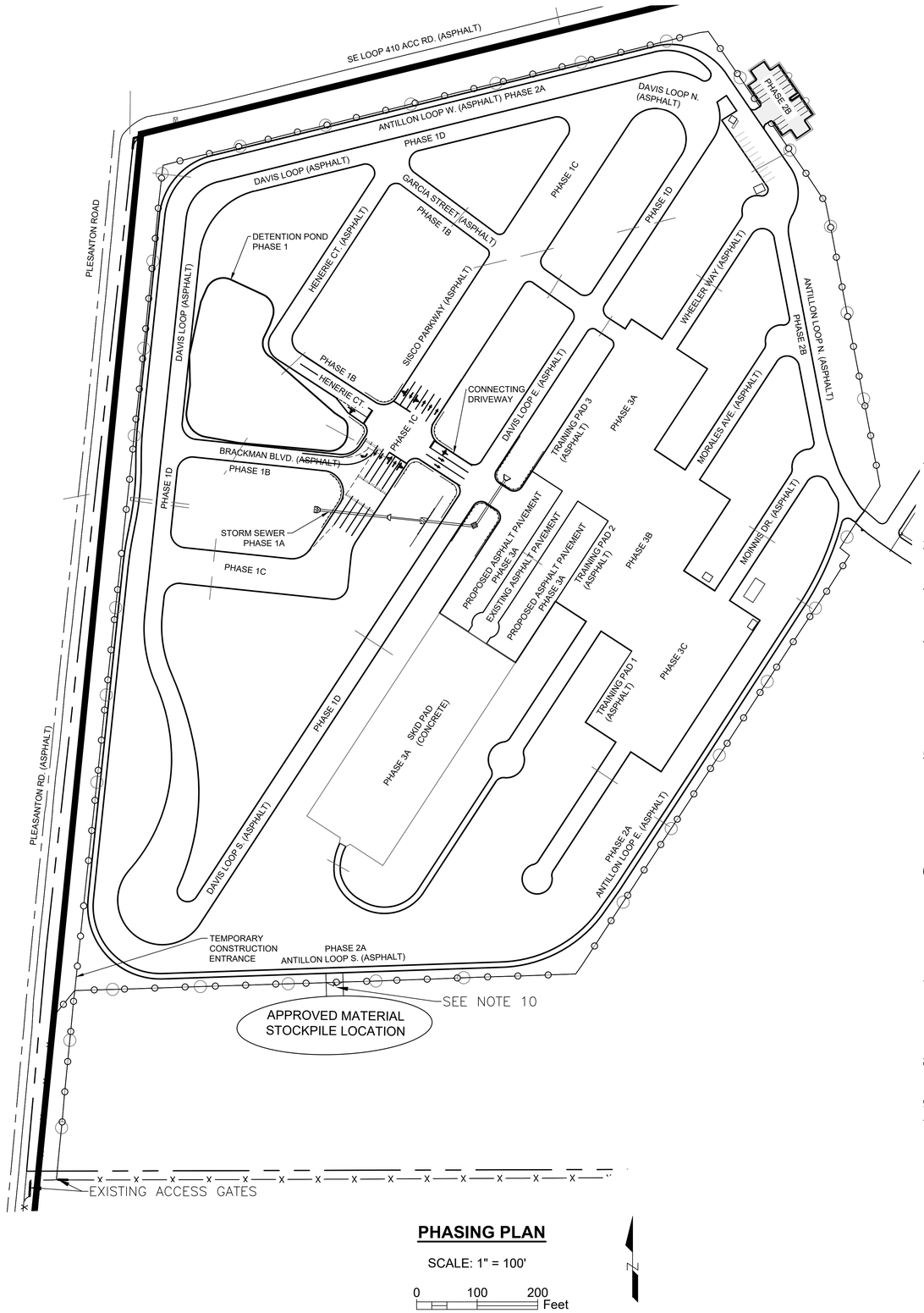

PHASING PLAN

SCALE: 1" = 100'

0 100 200 Feet

SAPD CONSTRUCTION PHASING

PHASE 1 CONSTRUCTION SHALL PERMIT SAPD USE OF ANTILLON LOOP AT ALL TIMES DURING PHASE ONE CONSTRUCTION.

PHASE 1A – CONSTRUCTIONS STORM SEWER AND DETENTION POND

PHASE 1B – CONSTRUCT BRACKMAN BLVD., HENERIE CT., AND GARCIA ST.

PHASE 1C _ SISCO PARKWAY – CONSTRUCT SISCO PARKWAY, INTERSECTION IMPROVEMENTS AND CONNECTING DRIVEWAY. CONSTRUCT NEW TRAFFIC SIGNAL WITH ASSOCIATED CONTROLLER, POLES, LIGHTS, CONDUITS, AND EQUIPMENT.

PHASE 1D DAVIS LOOP – CONSTRUCT DAVIS LOOP.

PHASE 2A ANTILLON LOOP – CONSTRUCT ANTILLON LOOP.

PHASE 2B ANTILLON LOOP – CONSTRUCT ANTILLON LOOP NORTH & TOWER PARKING WHILE PERMITTING THE USE OF PHASE 2A ANTILLON LOOP. CONSTRUCT SEVENTEEN SPACE PARKING LOT EXPANSION, FENCING, & STRIPING. CONTRACTOR IS TO CONSTRUCT PHASE 2B AFTER ALL OTHER PHASES ARE COMPLETED.

PHASE 3A WHEELER WAY – CONSTRUCT WHEELER WAY, INCLUDING PROPOSED NEW PAVEMENT, AND TRAINING PAD 3. REPAIR SKID PAD CONCRETE JOINTS AND PAVEMENT POINT REPAIR.

PHASE 3B MORALES AVE. – CONSTRUCT MORALES AVE., AND TRAINING PAD 2.

PHASE 3C MOINNIS DR. – CONSTRUCT MOINNIS DR., TRAINING PAD 1, AND CUL–DE–SAC.

NOTES:

1. IN EACH PHASE, CONTRACTOR SHALL INCLUDE IN THE BASE BID THE COST TO STOP AND START CONSTRUCTION ACTIVITIES FOR TWO WEEKS AT THE DISCRETION OF THE SAPD TRAINING ACADEMY SUPERVISOR. CONTRACTOR SHALL INCLUDE AS AN ALTERNATE IN THE BID THE COST TO STOP AND START CONSTRUCTION IN EXCESS OF THE 5 START AND STOPS INCLUDED IN THE BASE BID.
2. ALL PHASES OF WORK UNDER THIS CONTRACT SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE ITEMS OF TEXAS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
3. CONTRACTOR SHALL COMPLY WITH ALL LOCAL BUILDING CODES AND REGULATIONS, TDLR & ADA CODES AND SPECIFICATIONS, AS WELL AS OTHER SAFETY CODES AND INSPECTION PREVISIONS APPLICABLE TO THIS PROJECT.
4. CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
5. ALL WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE THEIR SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE SITE TO PROPERTY WHERE THE CONTRACTOR HAS THE CONSENT OF THE OWNERS. NO WASTE MATERIALS SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER THE RUNOFF OF THE EXISTING NATURAL DRAINAGE. MILLINGS, NATURAL TOPSOIL, AND SOIL EXCAVATION SHALL BE LOCATED IN SEPARATE STOCKPILES AS SHOWN ON THE AREA SOUTH OF THE DRIVING TRACK. THE LOOP ROAD SHALL REMAIN OPEN AT ALL TIMES FOR CADET TRAINING.
6. EXISTING ABOVE GROUND UTILITIES HAVE BEEN PLOTTED BY DIRECT FIELD INVESTIGATION (SURVEY PERFORMED BY OPEN RANGE FIELD SERVICES). UNDERGROUND UTILITIES HAVE BEEN COMPILED FROM VARIOUS SOURCES AND REQUIRE VERIFICATION BY THE CONTRACTOR TO ESTABLISH THEIR EXACT LOCATION AND DEPTH PRIOR TO SETTING ANY FINISH GRADE. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON DRAWINGS. DEAD UTILITY LINES SHALL BE SUITABLY CAPPED.
7. ANY EXISTING SITE IMPROVEMENT OR UTILITY REMOVED, DAMAGED OR UNDERCUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER AND APPROVED BY THE RESPECTIVE UTILITY AT THE CONTRACTOR'S EXPENSE.
8. FOR LOCATION OF UNDERGROUND ELECTRIC, GAS, TELEPHONE, AND WATER FACILITIES, CALL THE LOCAL UTILITY LOCATOR FORTY EIGHT HOURS BEFORE BEGINNING ANY EXCAVATION.
9. PROPOSED UTILITIES AND SLEEVES WILL BE INSTALLED PRIOR TO CONSTRUCTION OF ANTILLON LOOP PHASE 2B.
10. REMOVE ±28LF OF EXISTING FENCE AND INSTALL 2–14' WIDE X 6' TALL GATES.

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- EXISTING EDGE OF ASPHALT
- EXISTING BARBED WIRE FENCE
- EXISTING CHAINLINK FENCE

SLAY ARCHITECTURE

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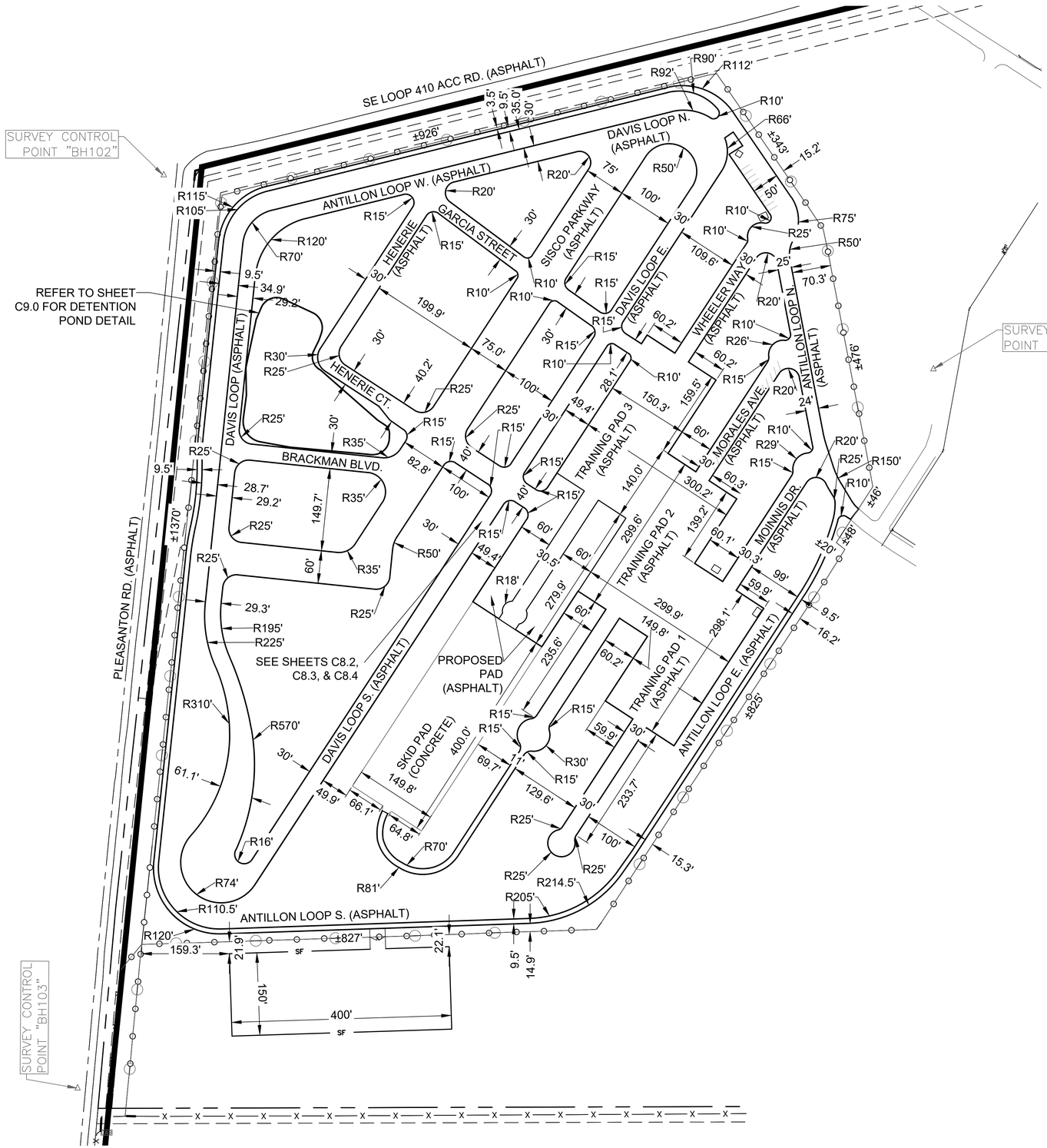
C4.0

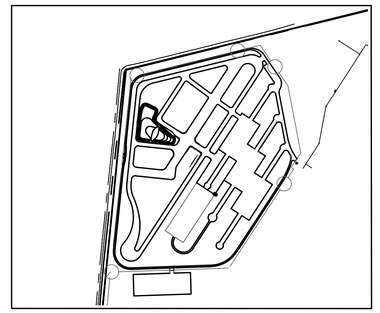
PHASING PLAN



DIMENSIONAL PLAN

SCALE: 1" = 100'

0 100 200 Feet



KEY MAP
1" = 500'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- 1000 EXISTING MAJOR CONTOUR
- 999 EXISTING MINOR CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING BARBED WIRE FENCE
- EXISTING CHAINLINK FENCE
- EXISTING WOOD FENCE
- E. OHE EXISTING OVERHEAD ELECTRIC LINE
- SF SILT FENCE
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE

BENCHMARKS:

SURVEY CONTROL POINT "BH100"
1/2" IRON ROD WITH CAP
NORTHING: 13,663,689.06
EASTING: 2,128,794.78
ELEV: 609.23'

SURVEY CONTROL POINT "BH102"
MAG NAIL WITH WASHER
NORTHING: 13,664,041.93
EASTING: 2,127,394.46
ELEV: 600.78'

SURVEY CONTROL POINT "BH103"
MAG NAIL WITH WASHER
NORTHING: 13,662,380.92
EASTING: 2,127,237.64
ELEV: 602.12'

NOTE:

1. ALL DIMENSIONS ARE TO BACK OF CURB

SLAY ARCHITECTURE

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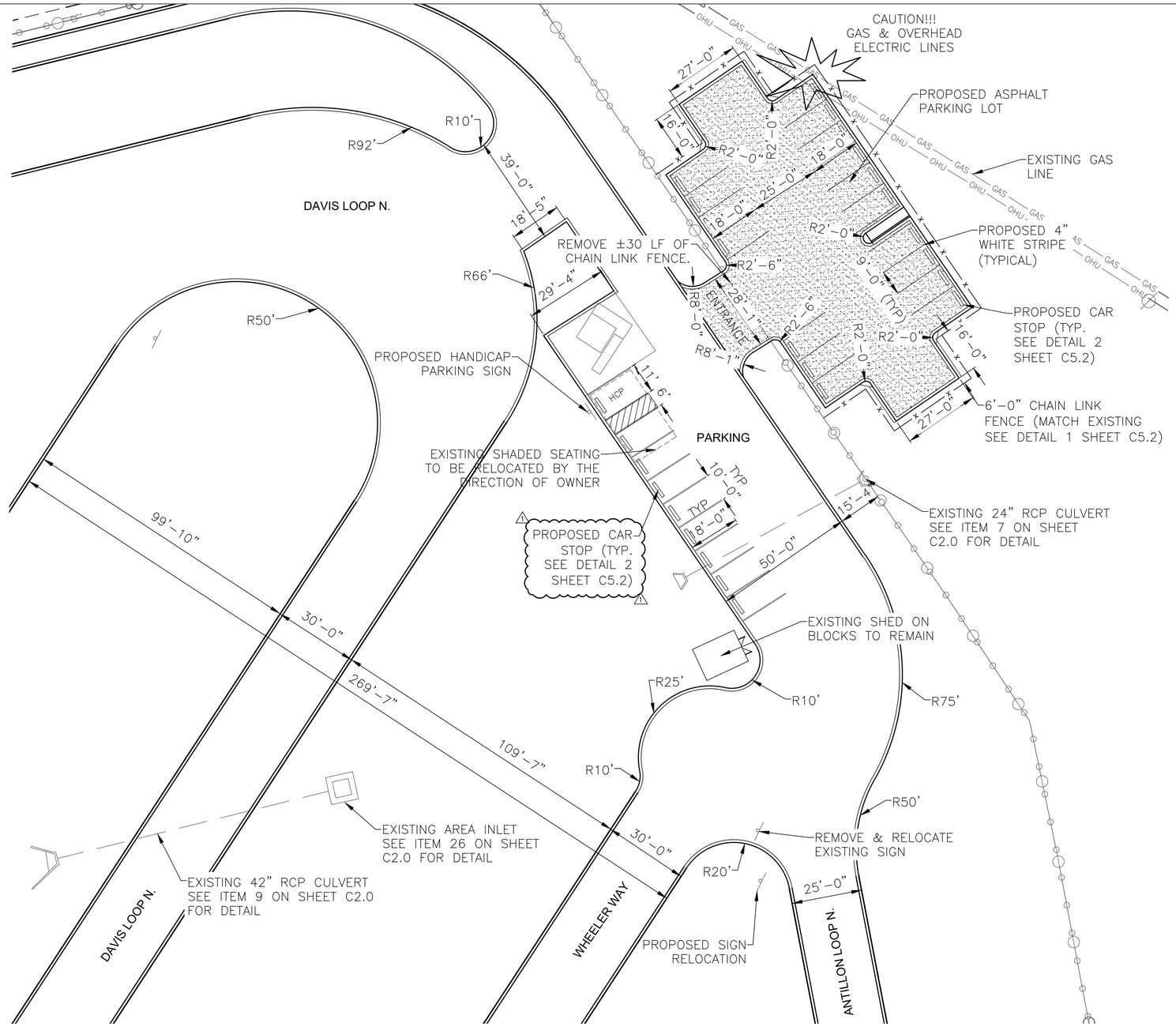
C5.0

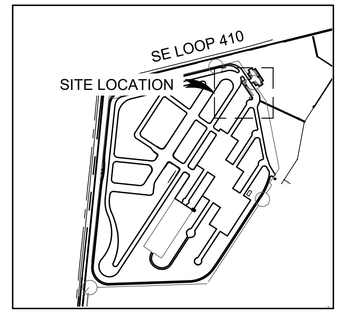
DIMENSIONAL PLAN



PARKING SITE PLAN

SCALE: 1" =20'

0 20 40 Feet



KEY MAP
1" = 500'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF ASPHALT
- EXISTING BARBED WIRE FENCE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING GAS LINE
- PROPOSED CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE
- PROPOSED CONCRETE
- PROPOSED ASPHALT PAVEMENT
- EXISTING UNDERGROUND GAS LINE PROXIMITY USE CAUTION
- HCP — HANDICAP PARKING
- EXISTING SIGN

NOTES:

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOULD BE POSTED ON ALL ACCESSIBLE PARKING SPACES MARKING THE RESERVED SPOT.
2. (A) HEAD–IN PARKING PLACES SHALL BE 9' X 18' TO 10' X 20' WITH 4" WIDE WHITE LINE.
3. REFERENCE ACADEMY – "DRIVING TRACK IMPROVEMENTS & PARKING EXPANSION GEOTECHNICAL ENGINEERING REPORT" PREPARED BY TERRACON (TERRACON PROJECT NO. 90235085) DATED OCTOBER 5, 2023 AND THE SUPPLEMENTAL ATTACHMENT FOR ALL GEOTECHNICAL DETAILS.

PARKING SUMMARY	
PROPOSED PARKING SPACES (NOT INCLUDING ADA SPACES)	25
REQUIRED ACCESSIBLE PARKING SPACES	1
PROPOSED ACCESSIBLE PARKING SPACES	1
TOTAL PARKING SPACES (INCLUDING ADA SPACES)	26

SLAY ARCHITECTURE

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SAPD ACADEMY TRACK PAVEMENT

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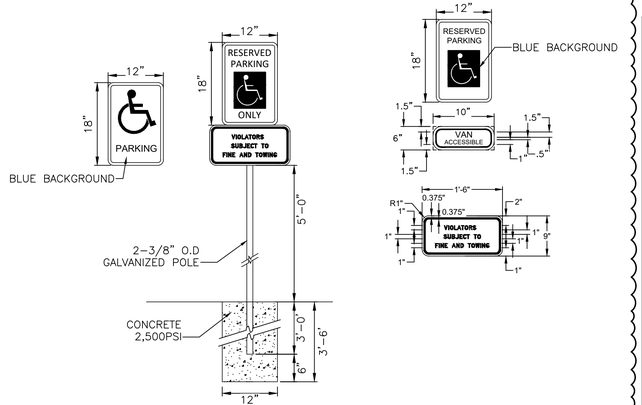
C5.1

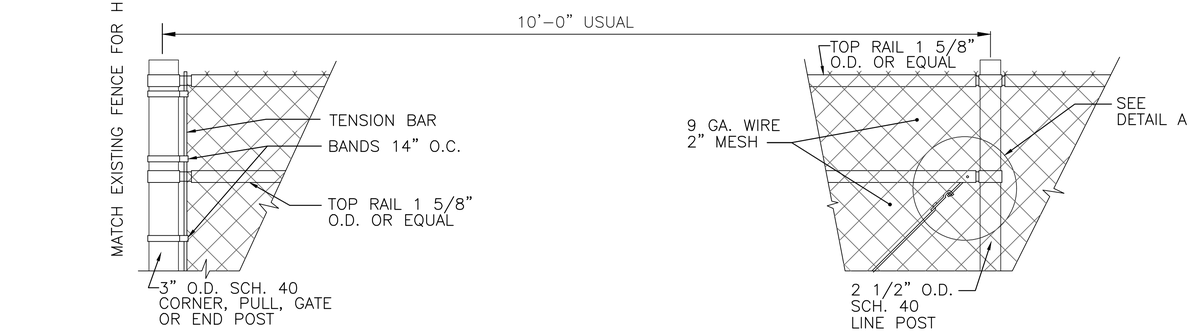
PARKING SITE PLAN

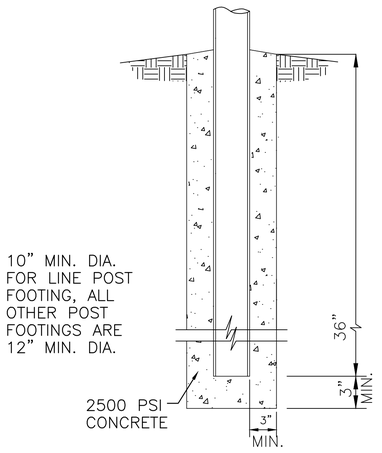
NOTE:

1. ADA ACCESS SIGNS NEED TO BE POSTED AT PROPERLY DESIGNATED ACCESSIBLE PARKING SPACES.
2. VAN–ACCESSIBLE PARKING SPACES TO HAVE ADDITIONAL 'SIGN' BELOW THE ACCESSIBILITY SYMBOL TO SPECIFICALLY MARK THE VAN–ACCESSIBLE AREA.
3. SIGN AND MOUNTING HEIGHT TO BE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT.
4. SIGNS SHOULD BE PLACED AT SUCH A HEIGHT (AT LEAST 60 INCHES ABOVE SURFACE) THAT THEY DO NOT GET OBSCURED BY ANY PARKED VEHICLES OR OTHER OBSTRUCTIONS. ADA HANDICAP PARKING SIGNS (COMMONLY KNOWN AS ACCESS SIGNS) POSTED MUST BE VISIBLE FROM THE DRIVERS' SEAT OF THE VEHICLE AND LOCATED RIGHT IN VIEW OF PARKING SPACES.

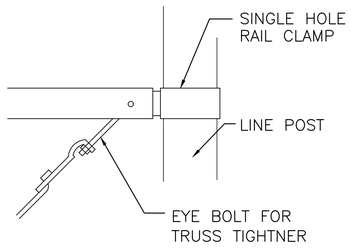


HANDICAP PARKING SIGN
NOT TO SCALE



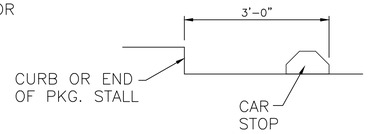


1 C5.2 CHAIN LINK FENCE AND DETAIL
NOT TO SCALE

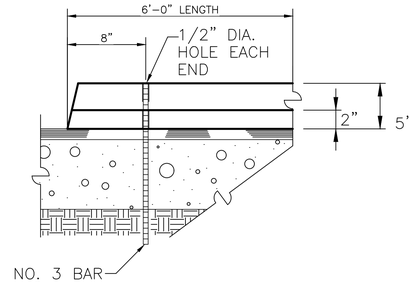


DETAIL A

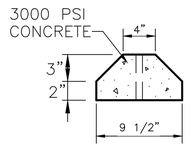
NOTE: PLACE CAR STOP IN CENTER OF STALL 3' FROM CURB OR END OF STALL AS SHOWN.



CAR STOP PLACEMENT



ELEVATION



SECTION

2 C5.2 CAR STOPS
NOT TO SCALE

SLAY ARCHITECTURE

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100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

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Project NO.: 22028
Date: 8/22/2025
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C5.2

PARKING DETAILS

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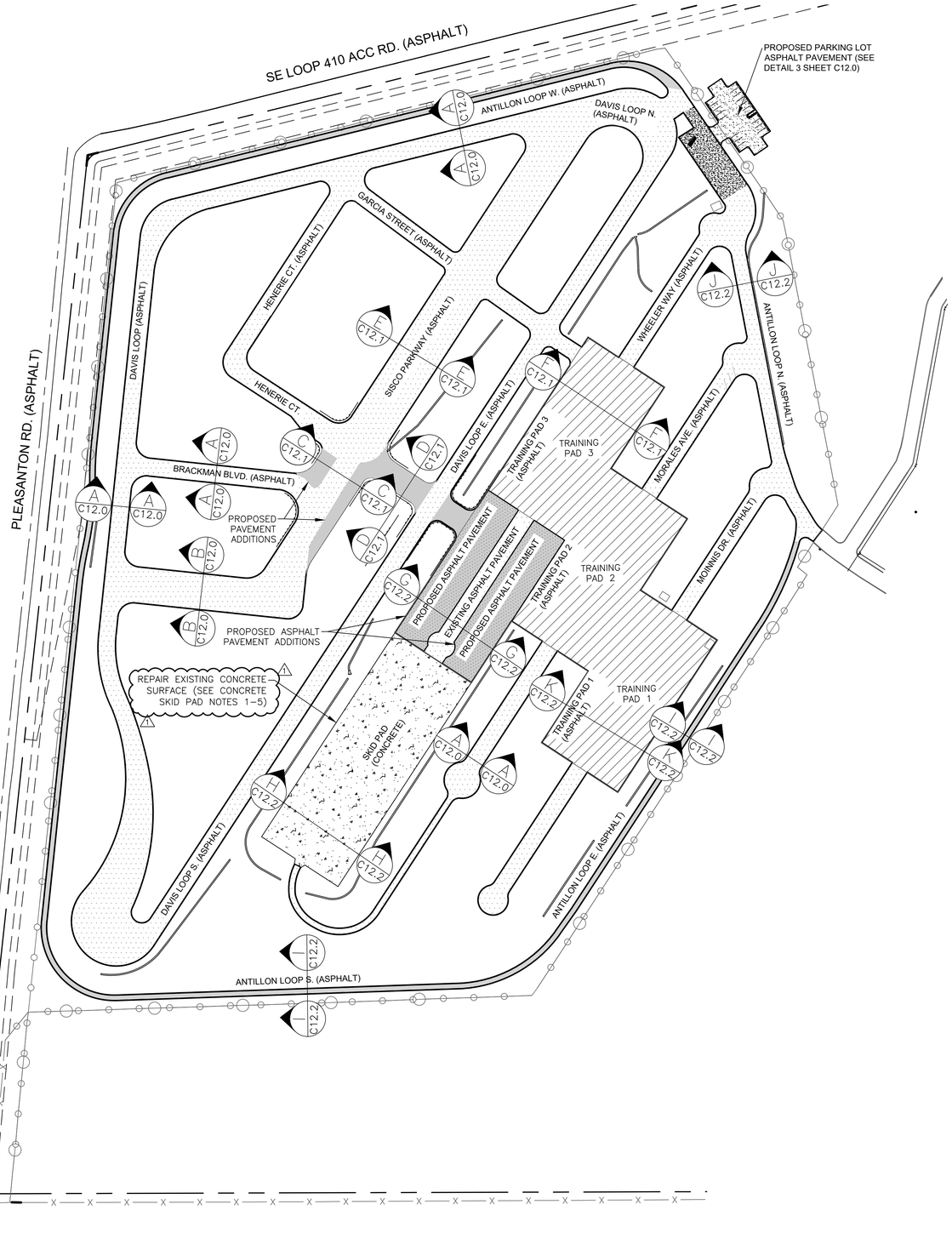

PAVING PLAN
SCALE: 1" = 100'
0 100 200 Feet

GENERAL NOTES:

1. PAVEMENT REPAIRS BASED ON 48,056 SY DETAIL 1 ON SHEET C12.0; 833 SY OF DETAIL 3 ON SHEET C12.0, AND 8606 SY OF DETAIL 4 OF SHEET C12.0. UNIT PRICE TO ADD OR DECREASE QUANTITY WILL BE AT THE UNIT PRICE BID.
2. SEE GRADING PLAN SHEETS C8.0–C8.4 FOR PROPOSED 2' CONCRETE SWALE.
3. SEE SHEET C12.0–C12.3 FOR TYPICAL PAVEMENT SECTIONS
4. CONTRACTOR SHALL TEMPORARILY RELOCATE SHADED SEATING TO GRASSED AREA DURING PHASE 2B.

CONCRETE SKID PAD NOTES:

1. FULL–DEPTH CONCRETE PAVEMENT REPAIR (FDCPR), TXDOT ITEM 361: SAWCUT FULL DEPTH ALONG LIMITS SHOWN OR AS DIRECTED; REMOVE EXISTING SLAB; REPAIR BASE/SUBGRADE AS NEEDED; INSTALL LOAD–TRANSFER DOWELS AT TRANSVERSE JOINTS; PLACE HCC TO PLAN THICKNESS/STRENGTH; FINISH/TEXTURE TO MATCH EXISTING; SAW AND SEAL JOINTS; CURE AND OPEN TO TRAFFIC PER ITEM 361.
2. ESTIMATED REPAIR QUANTITY: ASSUME 10% OF TOTAL PAD AREA FOR BIDDING (PLAN QTY: 660 SY). ACTUAL REPAIR LIMITS WILL BE DETERMINED WITH THE OWNER AT THE PRE–CONSTRUCTION MEETING AND VERIFIED BY THE ENGINEER IN THE FIELD. PAYMENT: BY MEASURED SY UNDER ITEM 361. IF THE ACTUAL REPAIR QUANTITIES DIFFER FROM THE ESTIMATED QUANTITY, ADJUSTMENTS WILL BE MADE BY CHANGE ORDER USING THE ORIGINAL UNIT PRICING FROM THE AWARDED BID.
3. BASE/SUBGRADE REPAIRS: UNDERCUT/COMPACTION AND BASE REPLACEMENT AS NEEDED; ADDITIONAL BASE PROVIDED/PAYED UNDER THE APPLICABLE ITEM (E.G., ITEM 247) OR AS DIRECTED.
4. JOINTS & LOAD TRANSFER: MATCH EXISTING JOINT LAYOUT WHERE FEASIBLE. PROVIDE DOWEL LOAD TRANSFER AT NEW TRANSVERSE JOINTS AND DOWEL RETROFIT WHEN TYING INTO EXISTING PANELS, PER ITEM 361 DETAILS.
5. SURFACE & DRAINAGE: MATCH EXISTING PAD GRADES AND CROSS–SLOPE; ENSURE POSITIVE DRAINAGE AT ALL TIE–INS.

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING BARBED WIRE FENCE
- EXISTING WOOD FENCE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- NEW PAVEMENT/COOL DOWN LOOP FULL DEPTH RECONSTRUCTION (DETAIL 4 SEE SHEET C12.0)
- ASPHALT TRACK PAVEMENT REMOVE EXISTING PAVEMENT, INSTALL 4" ATB + 2" HMAC (DETAIL 1 SEE SHEET C12.0)
- ASPHALT PAD PAVEMENT REMOVE EXISTING PAVEMENT, INSTALL 4" ATB + 2" HMAC (DETAIL 1 SEE SHEET C12.0)
- ASPHALT PAD NEW PAVEMENT (DETAIL 4 SEE SHEET C12.0)
- EXISTING CONCRETE SKID PAD MAINTENANCE (DETAIL 1 & 2 SEE SHEET C12.3)
- NEW PARKING LOT ASPHALT PAVEMENT (DETAIL 3 SEE SHEET C12.0)
- PARKING LOT ASPHALT PAVEMENT REMOVE EXISTING PAVEMENT, INSTALL 4" ATB + 2" HMAC (DETAIL 1 SEE SHEET 12.0)
- PROPOSED 2' CONCRETE SWALE (SEE SHEET C12.3)
- SECTION VIEW WITH REFERENCE SHEET NUMBER

SLAY ARCHITECTURE

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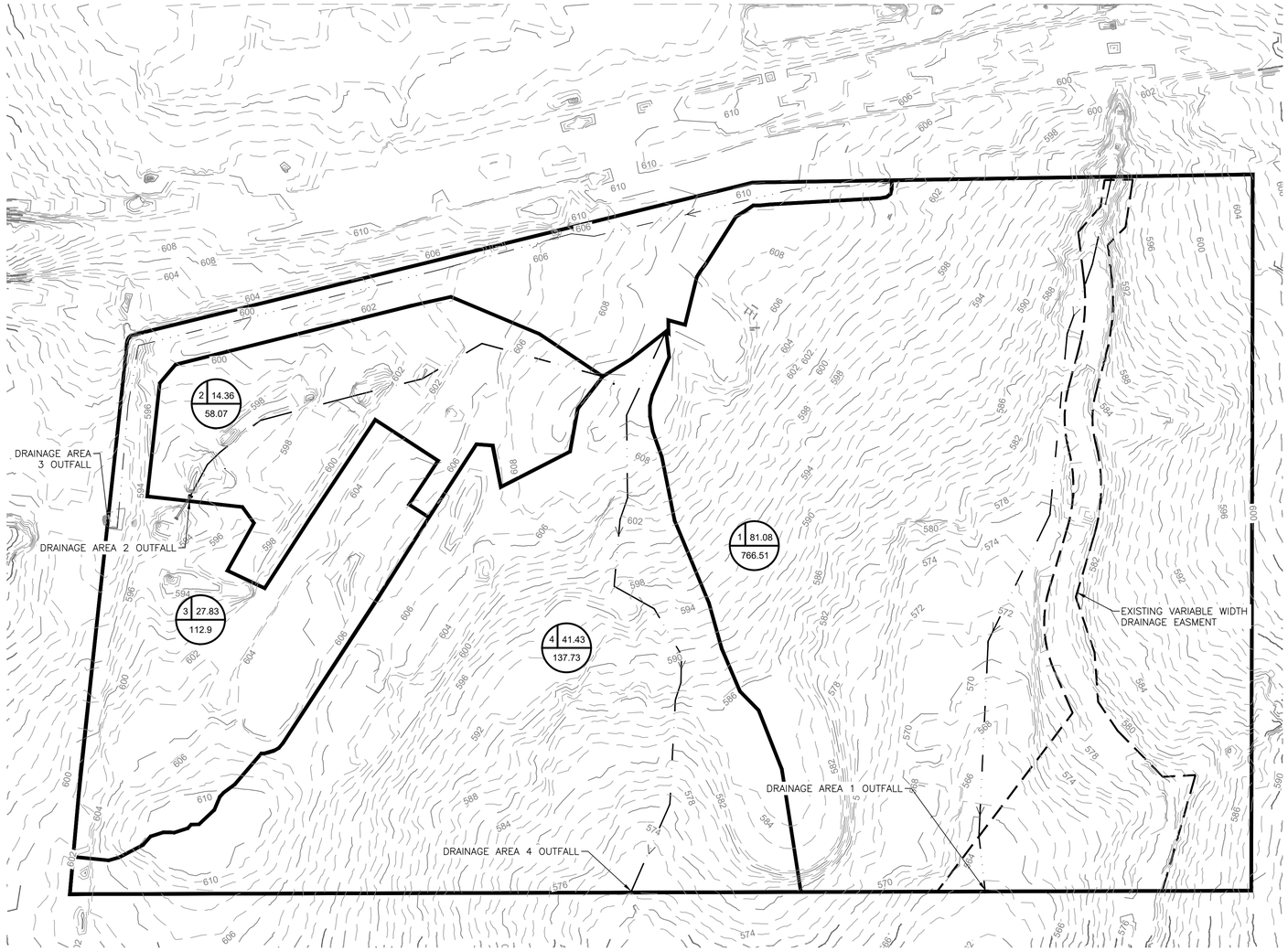
C6.0

PAVING PLAN



LEGEND:

- 1000 — EXISTING MAJOR CONTOUR
- 999 — EXISTING MINOR CONTOUR
- FLOWPATH
- EXISTING DRAINAGE EASEMENT
- DRAINAGE AREA BOUNDARY

DRAINAGE ID # 1 | AREA (AC.) 1.00
100-YR FLOW (CFS) 1.00

DRAINAGE AREA TABLE	
AREA NUMBER	ACRES
1	81.08
2	14.36
3	27.83
4	41.43

HEC–HMS OUTPUT TABLES

1-yr

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Existing	0.126683	247.67
Slay - DA - 2 Existing	0.022439	17.36
Slay - DA - 3 Existing	0.043478	34.54
Slay - DA - 4 Existing	0.064736	43.92

25-yr

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Existing	0.126683	597.49
Slay - DA - 2 Existing	0.022439	45.22
Slay - DA - 3 Existing	0.043478	88.06
Slay - DA - 4 Existing	0.064736	107.28

5-yr

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Existing	0.126683	410.82
Slay - DA - 2 Existing	0.022439	30.28
Slay - DA - 3 Existing	0.043478	59.33
Slay - DA - 4 Existing	0.064736	73.56

100-yr

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Existing	0.126683	766.51
Slay - DA - 2 Existing	0.022439	58.07
Slay - DA - 3 Existing	0.043478	112.9
Slay - DA - 4 Existing	0.064736	137.73

EXISTING DRAINAGE CONDITIONS

SCALE: 1" = 200'

0 200 400 Feet

N

SLAY ARCHITECTURE

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1

C7.0

EXISTING DRAINAGE CONDITIONS

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- 1000 EXISTING MAJOR CONTOUR
- 999 EXISTING MINOR CONTOUR
- PROPOSED CURB
- FLOW LINE
- EXISTING DRAINAGE EASEMENT
- DRAINAGE AREA BOUNDARY

DRAINAGE ID # 1 | 1.00 AREA (AC.)
1.00
100-YR FLOW (CFS)

DRAINAGE AREA TABLE	
AREA NUMBER	ACRES
1	81.08
2	14.36
3	27.83
4	41.43

HEC–HMS OUTPUT TABLES

1-YR STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Proposed W/ Det	0.126683	247.95
Slay - DA - 2 Proposed W/ Det	0.022439	17.63
Slay - DA - 3 Proposed W/ Det	0.043478	35.02
Slay - DA - 4 Proposed W/ Det	0.064736	44.16
Slay - DA - 1 Proposed No Det	0.126683	247.95
Slay - DA - 2 Proposed No Det	0.022439	17.63
Slay - DA - 3 Proposed No Det	0.043478	35.02
Slay - DA - 4 Proposed No Det	0.064736	44.16

5-YR STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Proposed W/ Det	0.126683	410.98
Slay - DA - 2 Proposed W/ Det	0.022439	30.48
Slay - DA - 3 Proposed W/ Det	0.043478	59.68
Slay - DA - 4 Proposed W/ Det	0.064736	73.7
Slay - DA - 1 Proposed No Det	0.126683	410.98
Slay - DA - 2 Proposed No Det	0.022439	30.48
Slay - DA - 3 Proposed No Det	0.043478	59.68
Slay - DA - 4 Proposed No Det	0.064736	73.7

25-YR STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Proposed W/ Det	0.126683	597.6
Slay - DA - 2 Proposed W/ Det	0.022439	45.35
Slay - DA - 3 Proposed W/ Det	0.043478	88.31
Slay - DA - 4 Proposed W/ Det	0.064736	107.38
Slay - DA - 1 Proposed No Det	0.126683	597.6
Slay - DA - 2 Proposed No Det	0.022439	45.35
Slay - DA - 3 Proposed No Det	0.043478	88.31
Slay - DA - 4 Proposed No Det	0.064736	107.38

100-YR STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)
Slay - DA - 1 Proposed W/ Det	0.126683	766.61
Slay - DA - 2 Proposed W/ Det	0.022439	58.18
Slay - DA - 3 Proposed W/ Det	0.043478	113.11
Slay - DA - 4 Proposed W/ Det	0.064736	137.82
Slay - DA - 1 Proposed No Det	0.126683	766.61
Slay - DA - 2 Proposed No Det	0.022439	58.18
Slay - DA - 3 Proposed No Det	0.043478	113.11
Slay - DA - 4 Proposed No Det	0.064736	137.82

PROPOSED DRAINAGE CONDITIONS

SCALE: 1" = 200'
0 200 400 Feet
N

SLAY ARCHITECTURE

SAN ANTONIO
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San Antonio, Texas 78201
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LAREDO
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STATE OF TEXAS
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44379
REGISTERED PROFESSIONAL ENGINEER
10/18/2024

100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C7.1
PROPOSED DRAINAGE CONDITIONS

8/21/2025 6:00:24 PM M:\2022\22-069 COSA Training Academy Driving Track Improvements\DWG\C9.2 OUTFALL DETAIL.dwg

NWQ SEE
SHEET C8.1

NEQ SEE
SHEET C8.2

SWQ SEE
SHEET C8.3

SEQ SEE
SHEET C8.4

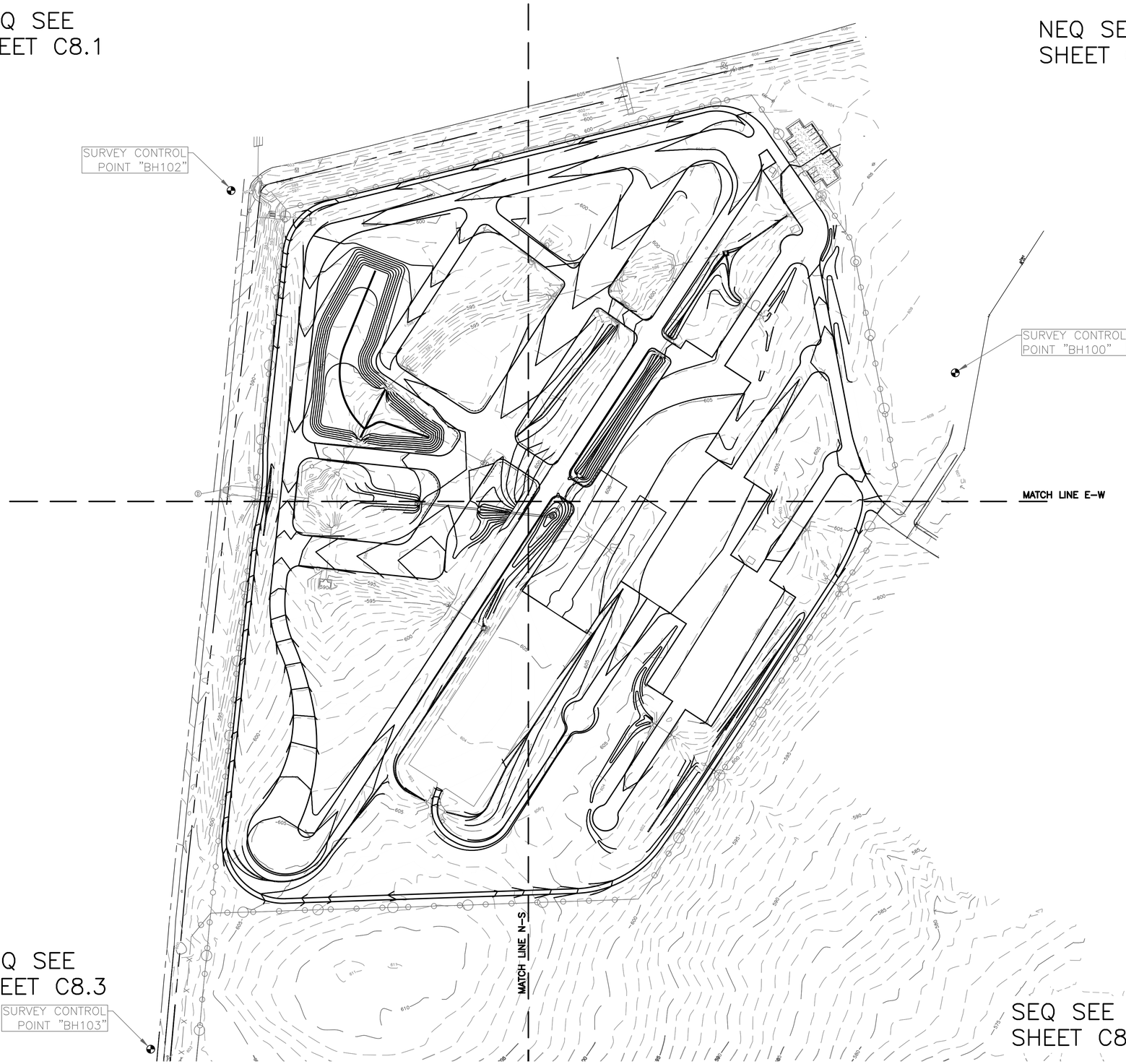
SURVEY CONTROL POINT "BH102"

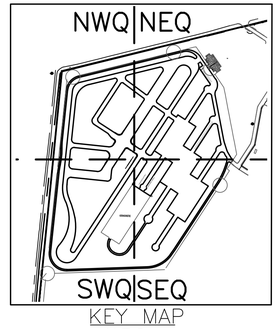
SURVEY CONTROL POINT "BH100"

SURVEY CONTROL POINT "BH103"

MATCH LINE E–W

MATCH LINE N–S





KEY MAP
N.T.S

NOTES:

1. SEE SHEET C2.0 FOR EXISTING STORM INFRASTRUCTURE DETAILS.

BENCHMARKS:

SURVEY CONTROL POINT "BH100"
1/2" IRON ROD WITH CAP
NORTHING: 13,663,689.06
EASTING: 2,128,794.78
ELEV: 609.23'

SURVEY CONTROL POINT "BH102"
MAG NAIL WITH WASHER
NORTHING: 13,664,041.93
EASTING: 2,127,394.46
ELEV: 600.78'

SURVEY CONTROL POINT "BH103"
MAG NAIL WITH WASHER
NORTHING: 13,662,380.92
EASTING: 2,127,237.64
ELEV: 602.12'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- 1000 EXISTING MAJOR CONTOUR
- 999 EXISTING MINOR CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING CHAINLINK FENCE
- E. OHE EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FIRE HYDRANT
- EXISTING POWER POLE
- EXISTING GUY WIRE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING GAS VALVE
- EXISTING SIGN
- EXISTING SPRINKLER VALVE
- EXISTING TREE
- x 400.00 EXISTING SPOT ELEVATION
- PROPOSED CURB
- BENCHMARK
- MATCH LINE X–X
- FLOW LINE
- ALTERNATE 1 PARKING (SEE DETAIL C8.5)

OVERALL GRADING

SCALE: 1" = 100'
0 100 200 Feet

SLAY ARCHITECTURE

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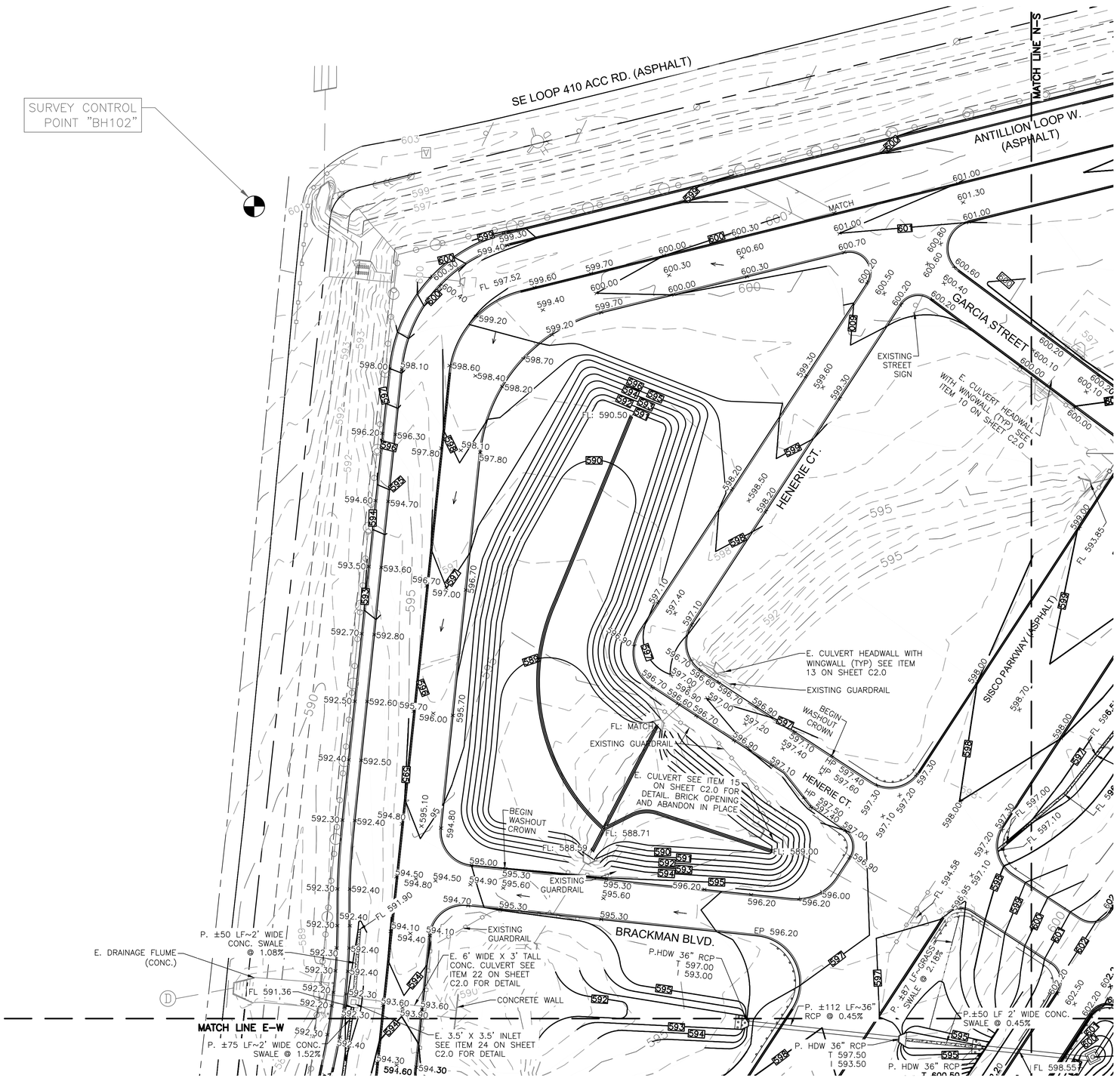
SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C8.0

OVERALL GRADING

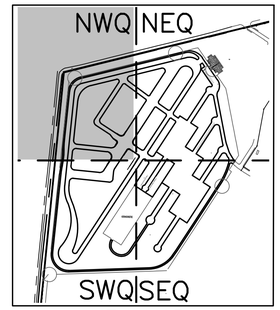


GRADING PLAN - NWQ

SCALE: 1" = 40'

0 40 80 Feet

N



KEY MAP
N.T.S

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- 1000 EXISTING MAJOR CONTOUR
- 999 EXISTING MINOR CONTOUR
- 1000 PROPOSED CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING CHAINLINK FENCE
- E. OHE EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FIRE HYDRANT
- EXISTING POWER POLE
- EXISTING GUY WIRE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING GAS VALVE
- EXISTING SIGN
- EXISTING SPRINKLER VALVE
- EXISTING TREE
- x 400.00 EXISTING SPOT ELEVATION
- PROPOSED CURB
- BENCHMARK
- MATCH LINE X-X
- E. EXISTING
- P. PROPOSED
- FLOW LINE

BENCHMARKS:

SURVEY CONTROL POINT "BH102"
MAG NAIL WITH WASHER
NORTHING: 13,664,041.93
EASTING: 2,127,394.46
ELEV: 600.78'

SLAY ARCHITECTURE

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100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C8.1

GRADING PLAN - NWQ

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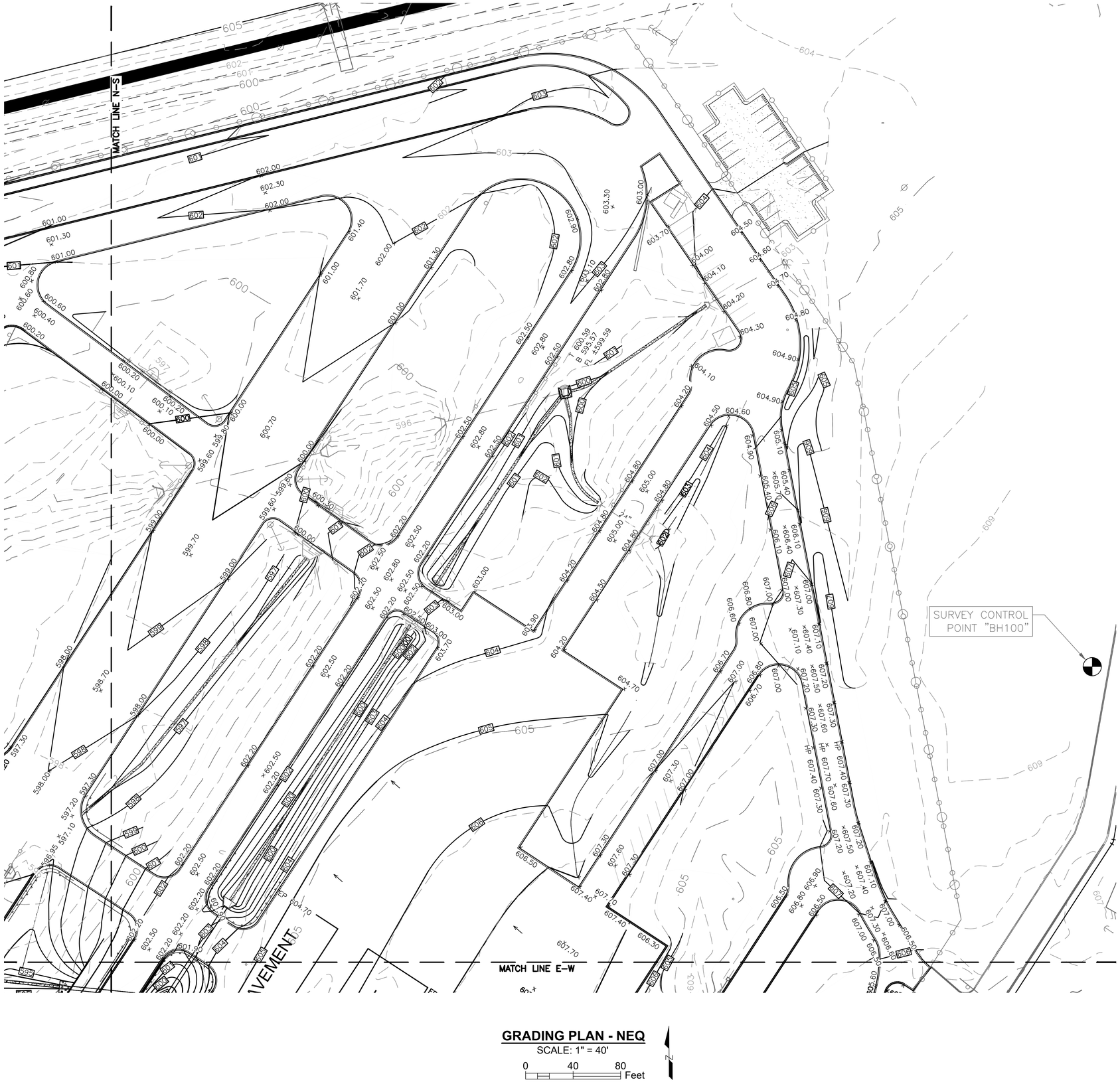
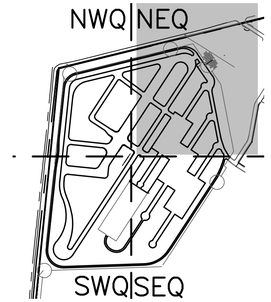


GRADING PLAN - NEQ

SCALE: 1" = 40'

0 40 80 Feet



KEY MAP
N.T.S

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- 1000 EXISTING MAJOR CONTOUR
- 999 EXISTING MINOR CONTOUR
- 1000 PROPOSED CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING CHAINLINK FENCE
- E. OHE EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FIRE HYDRANT
- EXISTING POWER POLE
- EXISTING GUY WIRE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING GAS VALVE
- EXISTING SIGN
- EXISTING SPRINKLER VALVE
- EXISTING TREE
- × 400.00 EXISTING SPOT ELEVATION
- PROPOSED CURB
- BENCHMARK
- MATCH LINE X–X

BENCHMARKS:

SURVEY CONTROL POINT "BH100"
1/2" IRON ROD WITH CAP
NORTHING: 13,663,689.06
EASTING: 2,128,794.78
ELEV: 609.23'

SLAY ARCHITECTURE

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100% CONSTRUCTION DOCUMENTS

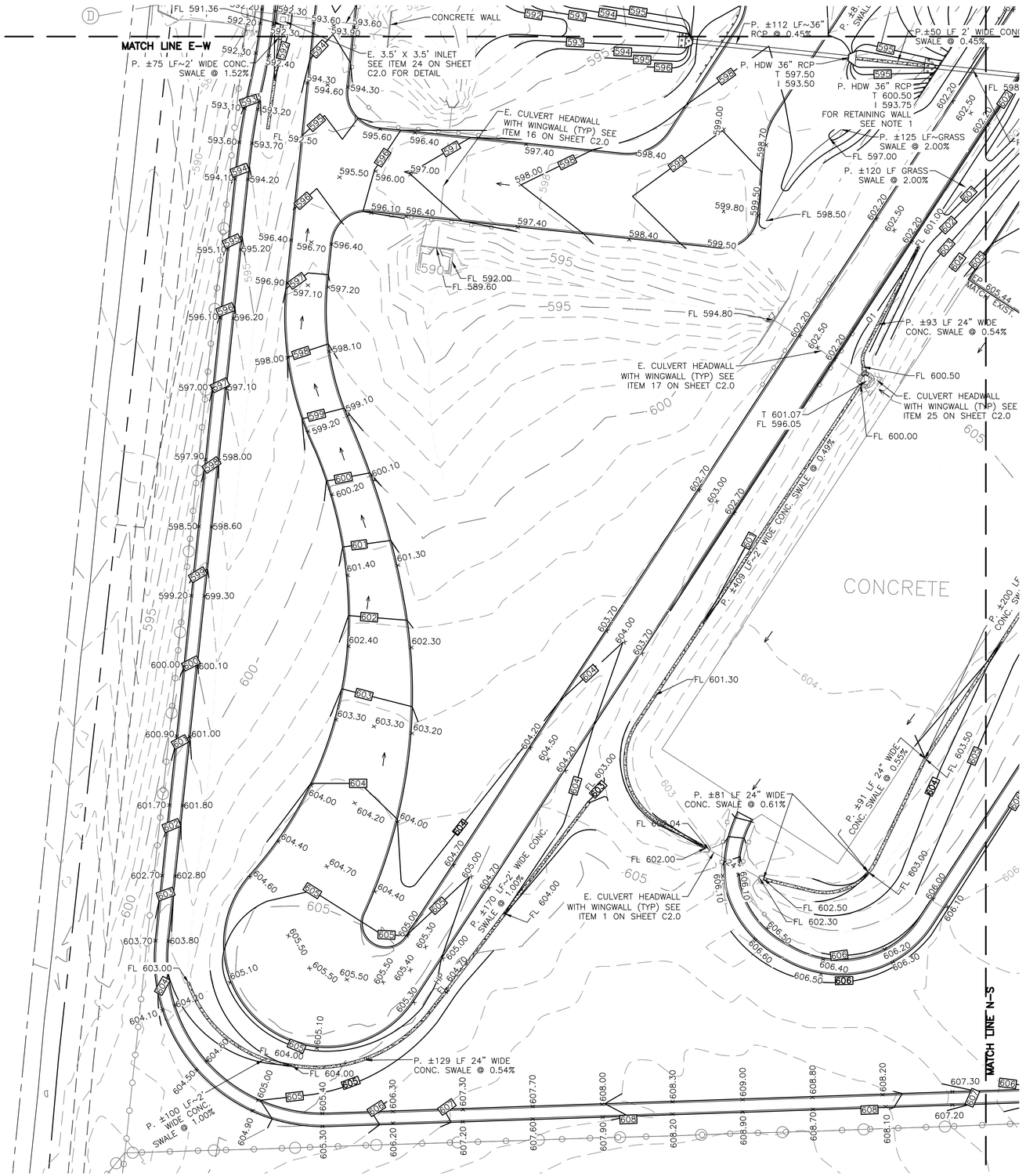
SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C8.2

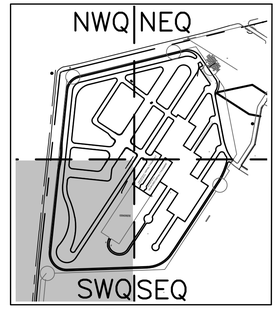
GRADING PLAN - NEQ



GRADING PLAN - SWQ

SCALE: 1" = 40'

0 40 80 Feet



KEY MAP

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING CHAINLINK FENCE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FIRE HYDRANT
- EXISTING POWER POLE
- EXISTING GUY WIRE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING GAS VALVE
- EXISTING SIGN
- EXISTING SPRINKLER VALVE
- EXISTING TREE
- EXISTING SPOT ELEVATION
- PROPOSED CURB
- MATCH LINE X–X
- E. EXISTING
- P. PROPOSED
- FLOW LINE

NOTE:
1. PROPOSED ENGINEERED RETAINING WALL. SEE STRUCTURED SHEEETS BY LUNDY AND FRANKE FOR DETAIL

SLAY ARCHITECTURE

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SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C8.3

GRADING PLAN - SWQ

GRADING PLAN - SEQ

SCALE: 1" = 40'

0 40 80 Feet

KEY MAP

N.T.S

LEGEND

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EASEMENT LINE
1000	EXISTING MAJOR CONTOUR
999	EXISTING MINOR CONTOUR
1000	PROPOSED CONTOUR
	EXISTING EDGE OF ASPHALT
	EXISTING CHAINLINK FENCE
E. OHE	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING FIRE HYDRANT
	EXISTING POWER POLE
	EXISTING GUY WIRE
W	EXISTING WATER VALVE
W	EXISTING WATER METER
G	EXISTING GAS VALVE
	EXISTING SIGN
	EXISTING SPRINKLER VALVE
	EXISTING TREE
x 400.00	EXISTING SPOT ELEVATION
	PROPOSED CURB
	MATCH LINE X-X
E.	EXISTING
P.	PROPOSED
	FLOW LINE

SLAY ARCHITECTURE

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MICHAEL M. SLAY
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REGISTERED
PROFESSIONAL ENGINEER

Michael Slay 10/18/2024

100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C8.4

GRADING PLAN - SEQ

The record of this drawing is on file at the offices of Slay Architecture, 123 Altgelt Avenue, San Antonio, Texas 78201 & 9901 McPherson Avenue, Suite 104, Laredo, Texas 78045. This document is released for the purpose of reference, coordination, and/of facility management under the authority of the named professional, registration number and date on the seal affixed above. This document was prepared using computer assisted design and drafting equipment and saved on magnetic media. Neither the printed document nor the magnetic media may be altered or amended by any party other than Slay Architecture.

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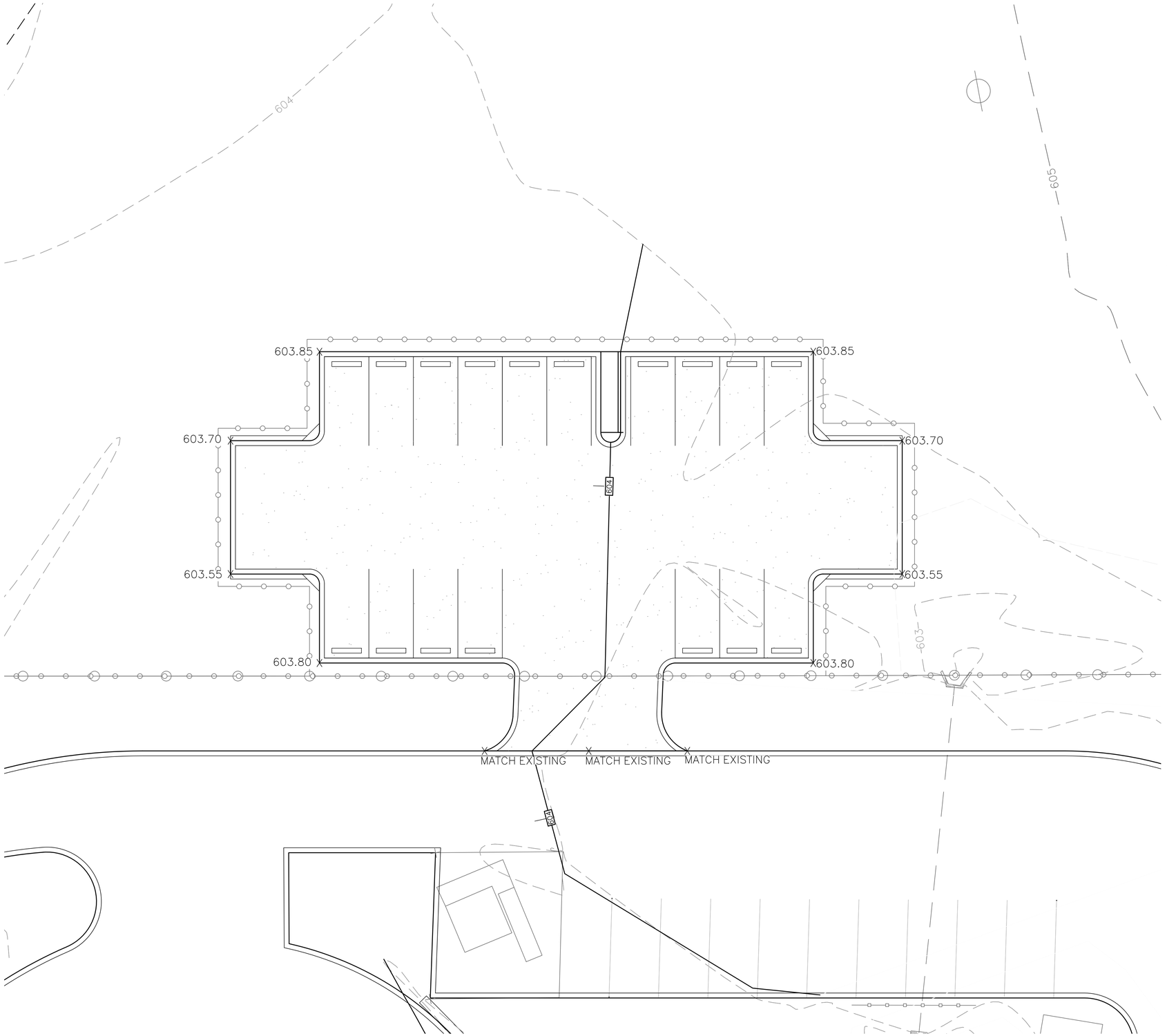
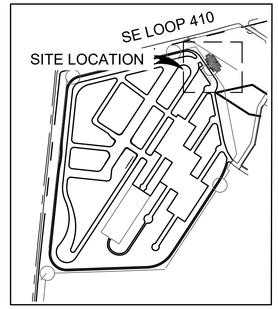


GRADING PLAN PARKING

SCALE: 1" = 10'

0 10 20 Feet



KEY MAP
N.T.S

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- 1000 — EXISTING MAJOR CONTOUR
- 999 — EXISTING MINOR CONTOUR
- 1000 — PROPOSED CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING CHAINLINK FENCE
- E. OHE — EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FIRE HYDRANT
- EXISTING POWER POLE
- EXISTING GUY WIRE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING GAS VALVE
- EXISTING SIGN
- EXISTING SPRINKLER VALVE
- EXISTING TREE
- x 400.00 — EXISTING SPOT ELEVATION
- PROPOSED CURB
- BENCHMARK
- MATCH LINE X–X
- E. — EXISTING
- P. — PROPOSED
- FLOW LINE
- ALTERNATE 1 PARKING

BENCHMARKS:

SURVEY CONTROL POINT "BH100"
1/2" IRON ROD WITH CAP
NORTHING: 13,663,689.06
EASTING: 2,128,794.78
ELEV: 609.23'

SLAY ARCHITECTURE

SAN ANTONIO
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STATE OF TEXAS
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REGISTERED PROFESSIONAL ENGINEER
10/18/2024

100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C8.5

GRADING PLAN PARKING

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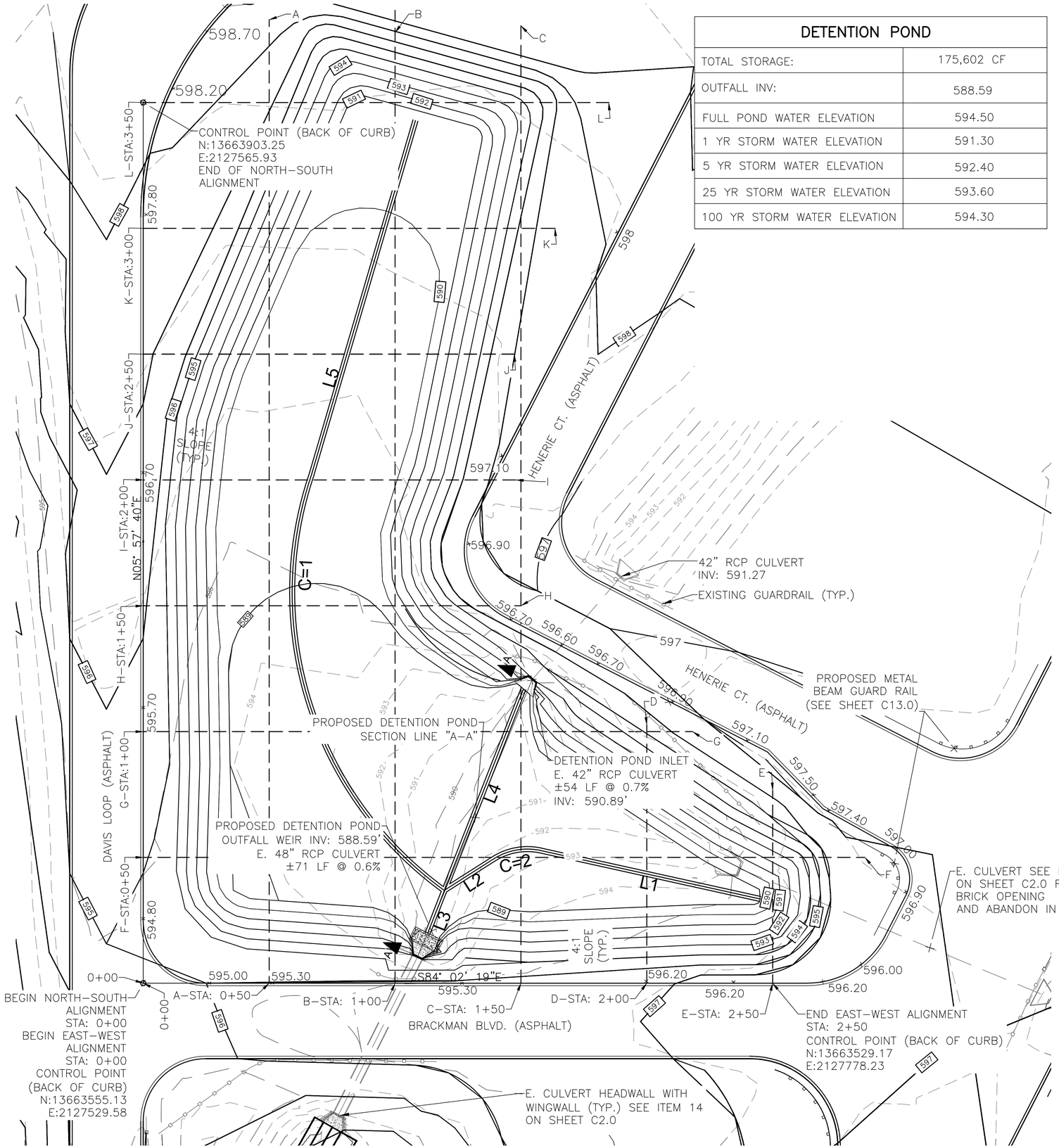


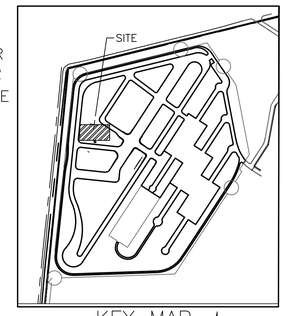
DETENTION POND	
TOTAL STORAGE:	175,602 CF
OUTFALL INV:	588.59
FULL POND WATER ELEVATION	594.50
1 YR STORM WATER ELEVATION	591.30
5 YR STORM WATER ELEVATION	592.40
25 YR STORM WATER ELEVATION	593.60
100 YR STORM WATER ELEVATION	594.30

LEGEND

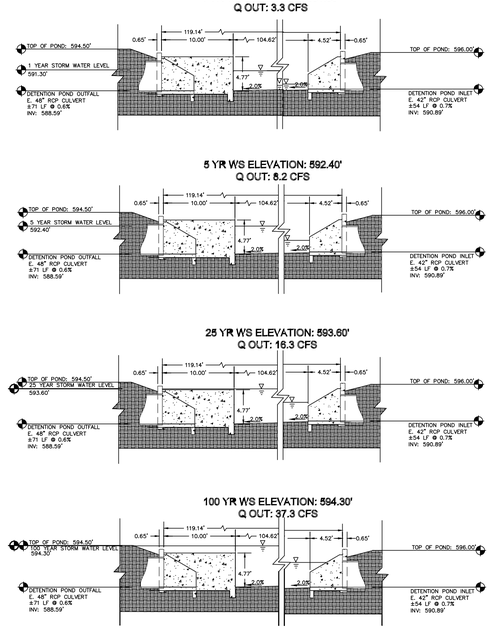
- 1000 — EXISTING MAJOR CONTOUR
- 999 — EXISTING MINOR CONTOUR
- EXISTING CHAINLINK FENCE
- 600 — PROPOSED CONTOUR

Parcel Line Table		
Line #	Length	Direction
L1	89.18	N71° 35' 05.38"W
L2	23.22	S63° 19' 56.54"W
L3	23.12	S27° 22' 14.03"W
L4	85.81	N27° 21' 46.68"E
L5	148.91	N22° 16' 24.45"E

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C=1	186.00	146.24	72.87	S11° 40' 51"E	173.72
C=2	19.63	25.00	44.98	S85° 55' 25"W	19.13



KEY MAP
N.T.S



Section "A-A"

SCALE: 1" = 10'

DETENTION POND

0 20 40 Feet

SCALE: 1" = 20'

NOTE:

1. DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CONSTRUCTION OF FLEX BASE, PAVEMENT, POURING BUILDING SLABS, OR CONSTRUCTING OTHER IMPERVIOUS COVER WITHIN THE WATERSHED DRAINING TO THE DETENTION POND(S). CONTACT COSA DEVELOPMENT SERVICES DEPARTMENT FOR A SITE INSPECTION.
2. SEE SHEETS C8.1 AND SHEETS C9.1 FOR DETENTION POND DETAILS.

SLAY ARCHITECTURE

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PROFESSIONAL ENGINEER
10/18/2024

100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C9.0
DETENTION POND

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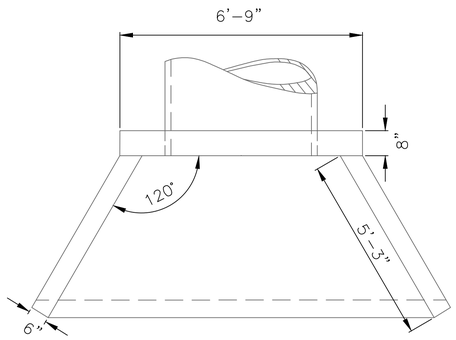
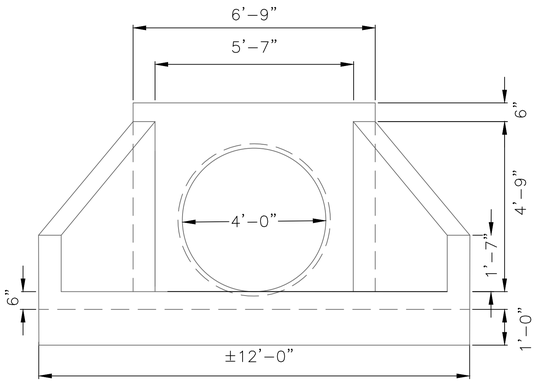


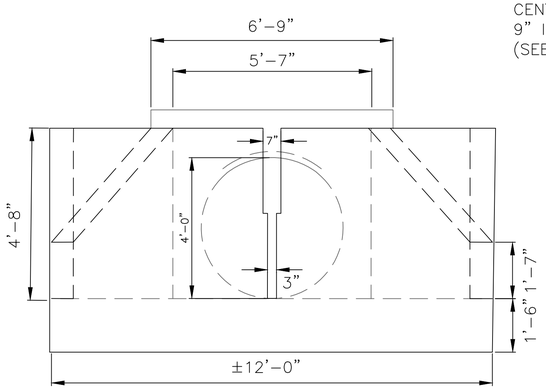
EXISTING CONCRETE HEADWALL

PLAN VIEW

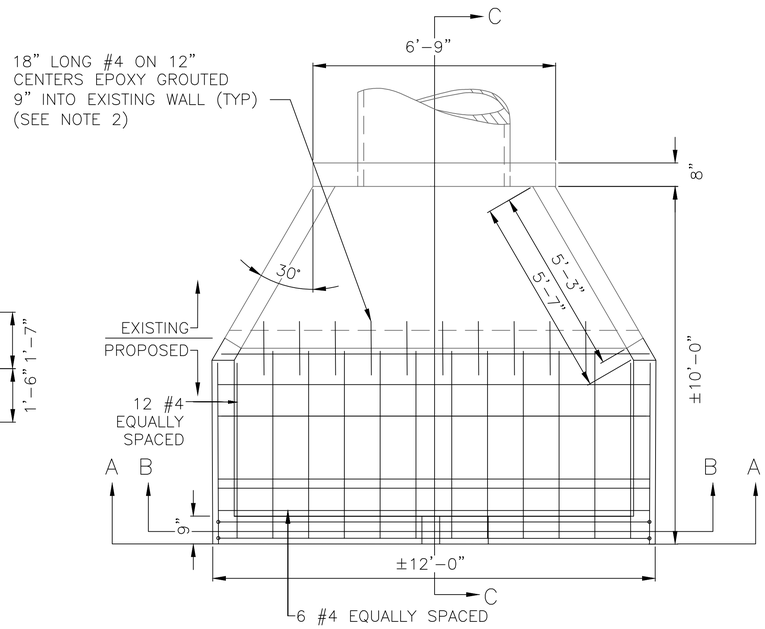


EXISTING CONCRETE HEADWALL

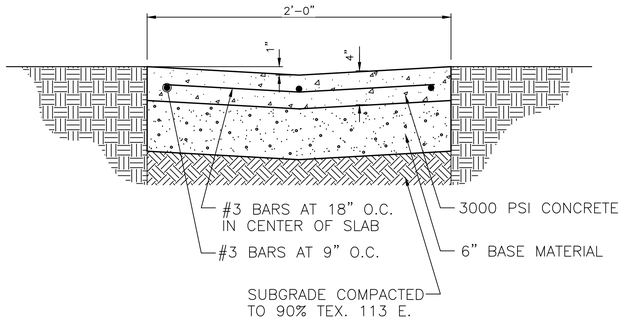
FRONT VIEW



FRONT

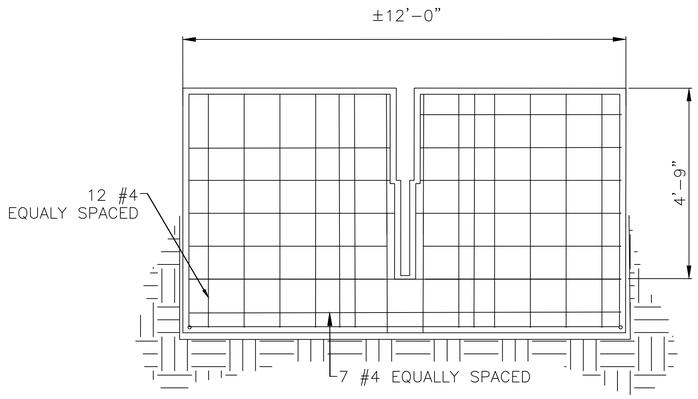


PLAN

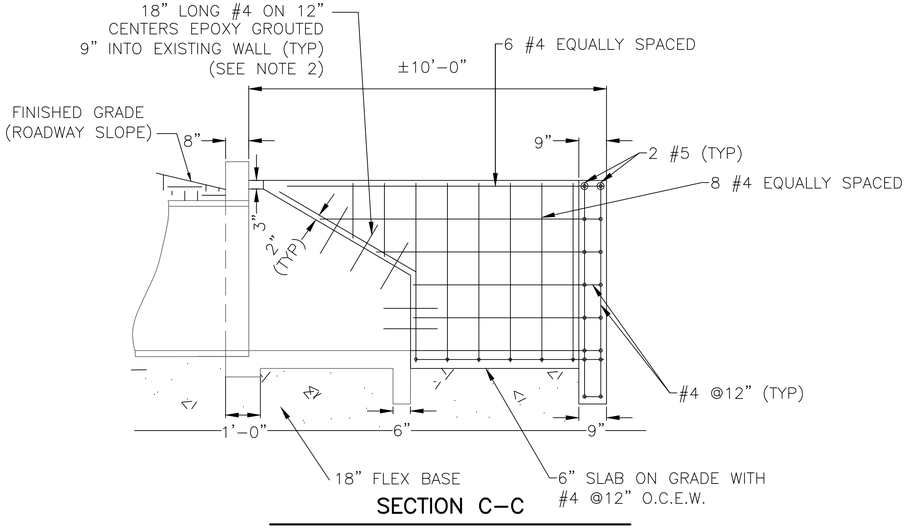


CONCRETE SWALE

NOT TO SCALE



SECTION B–B



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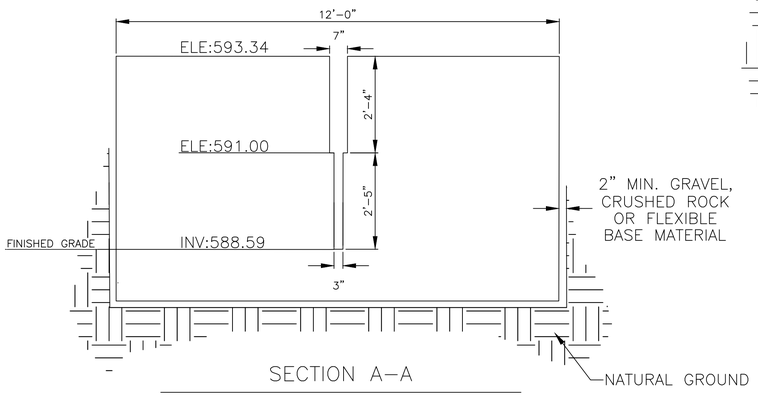

SECTION A–A

DETENTION POND OUTFALL DETAIL

NOT TO SCALE

NOTE:

1. DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CONSTRUCTION OF FLEX BASE, PAVEMENT, POURING BUILDING SLABS, OR CONSTRUCTING OTHER IMPERVIOUS COVER WITHIN THE WATERSHED DRAINING TO THE DETENTION POND(S). CONTACT COSA DEVELOPMENT SERVICES DEPARTMENT FOR A SITE INSPECTION.
2. DOWELS SHALL BE INSTALLED USING HILTI HIT–HY 200–A WITH V3 ADHESIVE ANCHORS OR AN APPROVED EQUAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO CONSTRUCTION. ANY CONFLICTS OR UNCERTAINTIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION BEFORE PROCEEDING. ALL WORK SHALL CONFORM TO CITY AND PROJECT SPECIFICATIONS AND SHALL BE PERFORMED BY QUALIFIED PERSONNEL.

SLAY ARCHITECTURE

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10/18/2024

100% CONSTRUCTION DOCUMENTS

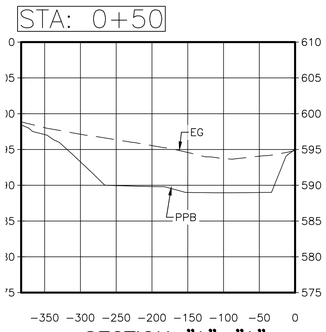
SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C9.1

DETENTION POND OUTFALL DETAIL



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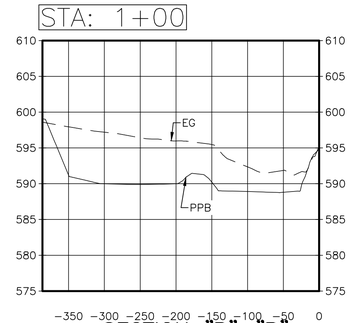

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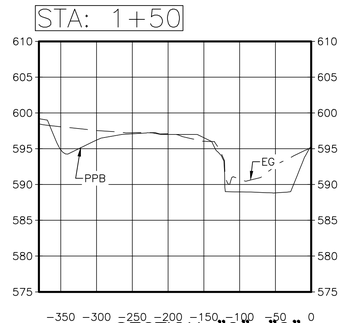

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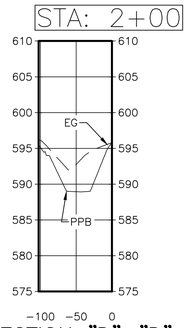

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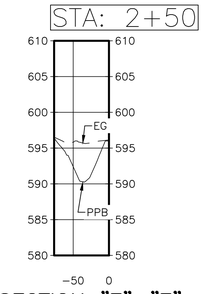

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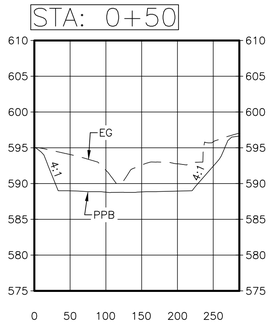

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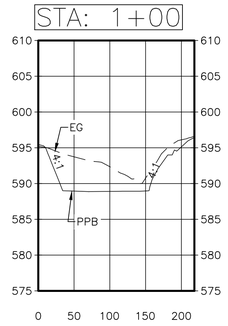

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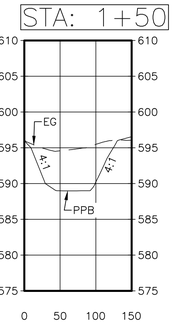

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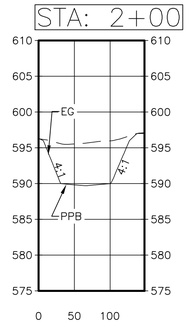

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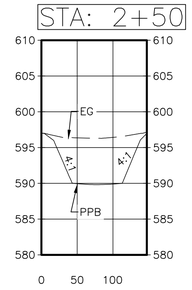

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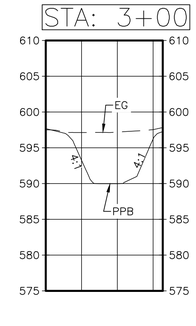

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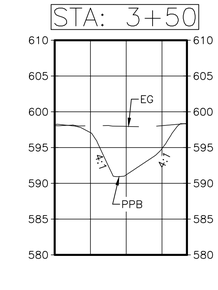
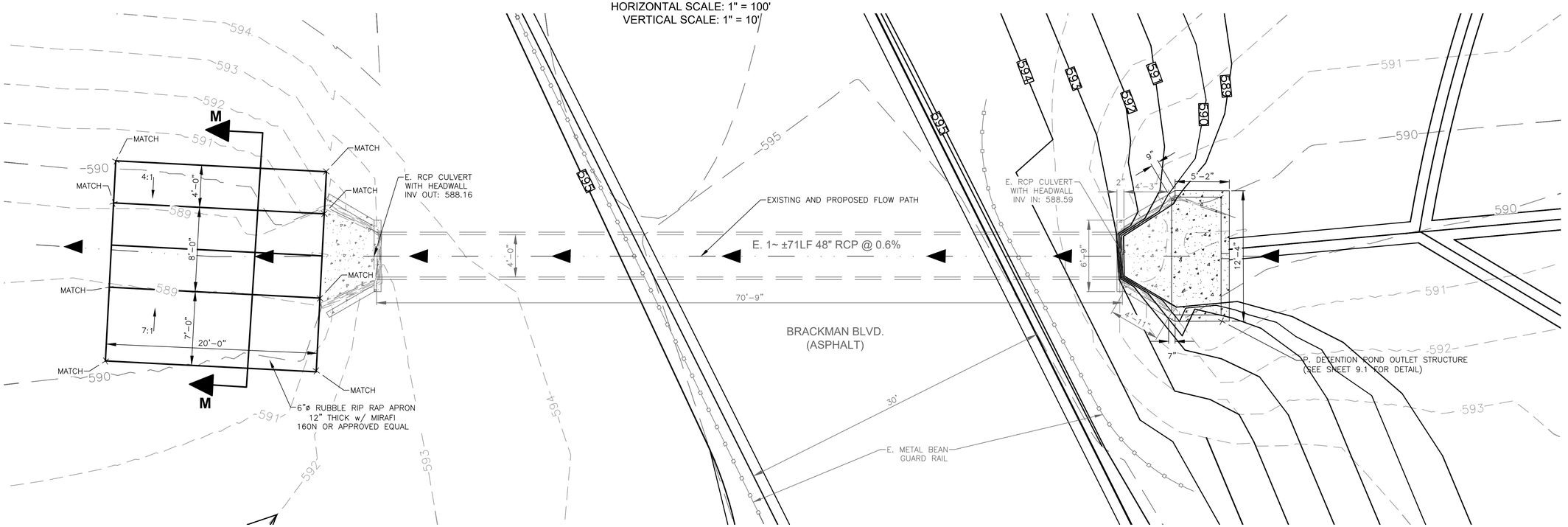


SECTION "L"–"L"

DETENTION POND SECTIONS

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'



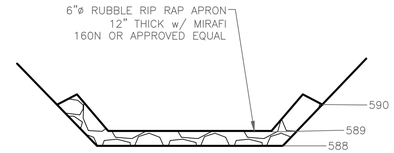
OUTLET STRUCTURE DETAIL PLAN

SCALE: 1" = 5'

LEGEND

E. GROUND

P. POND BOTTOM



OUTLET RUBBLE RIP RAP SECTION "M"-"M"

SCALE: N.T.S.

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10/18/2024

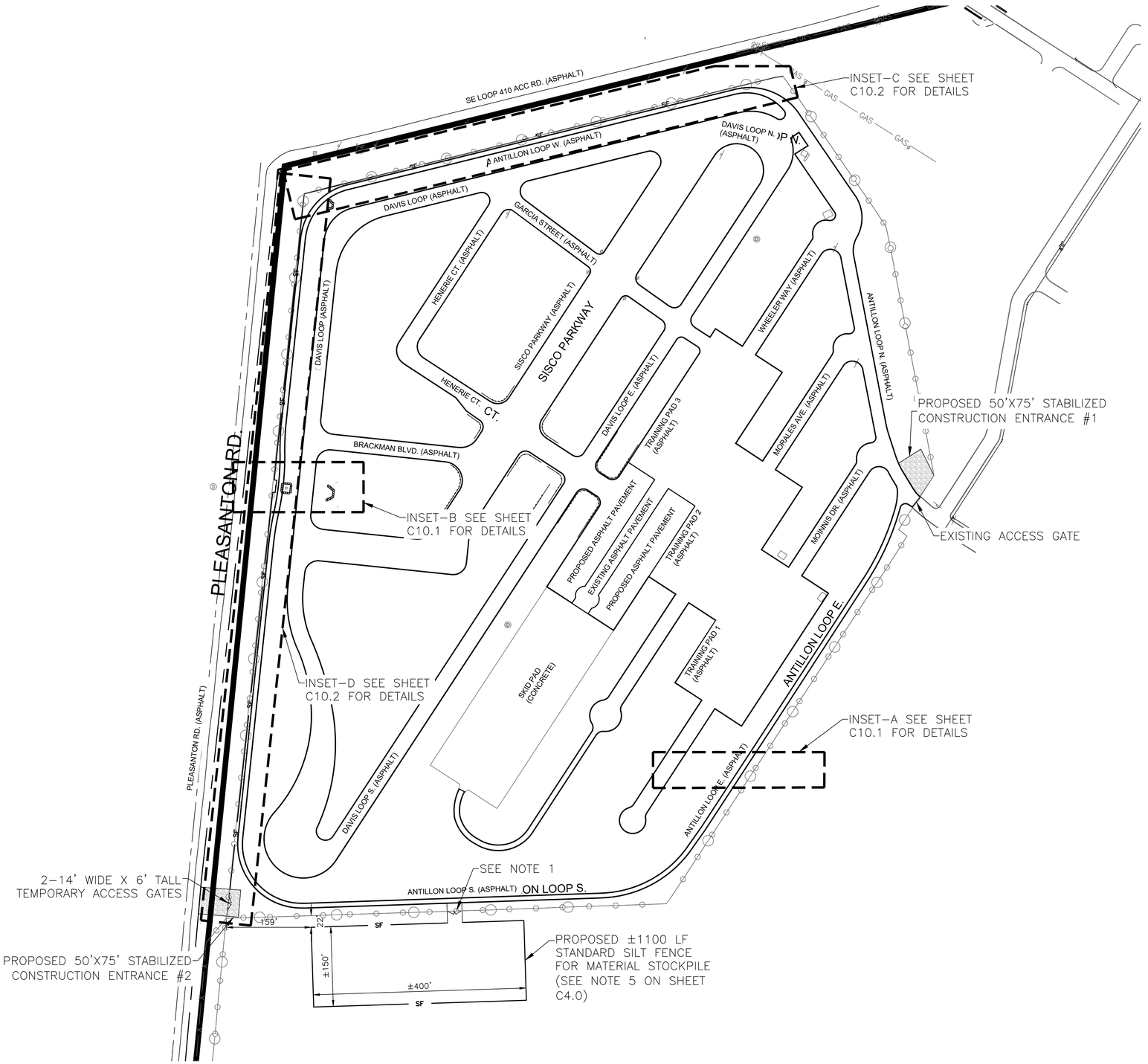
100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date: 8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C9.2
DETENTION POND SECTIONS



LEGEND

- 1000 — EXISTING MAJOR CONTOUR
- 999 — EXISTING MINOR CONTOUR
- PROPERTY LINE
- SF — SILT FENCE
- GRAVEL FILTER BAG (GFB)
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- CB — CATCH BASIN
- STABILIZED CONSTRUCTION ENTRANCE
- CHAINLINK FENCE
- GUARDRAIL
- INSET LOCATION

NOTES:

1. REMOVE ±28LF OF EXISTING FENCE AND INSTALL 2–14' WIDE X 6' TALL GATES.

SWPPP OVERALL

0 100 200 Feet

SCALE: 1" = 100'

N

SLAY ARCHITECTURE

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SAPD ACADEMY TRACK PAVEMENT

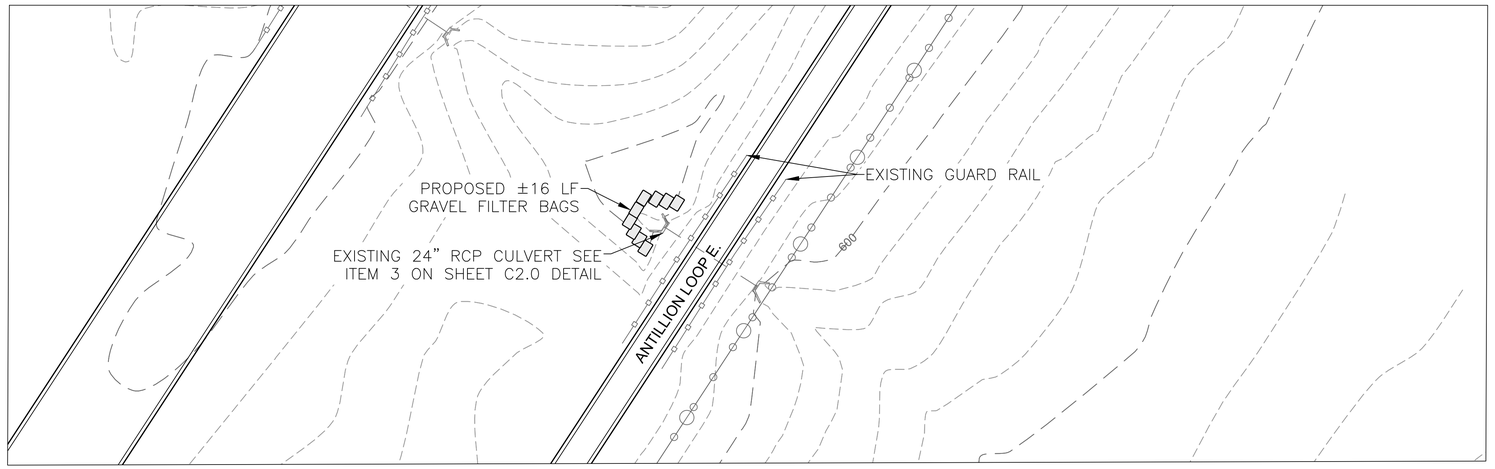
12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C10.0

SWPPP OVERALL

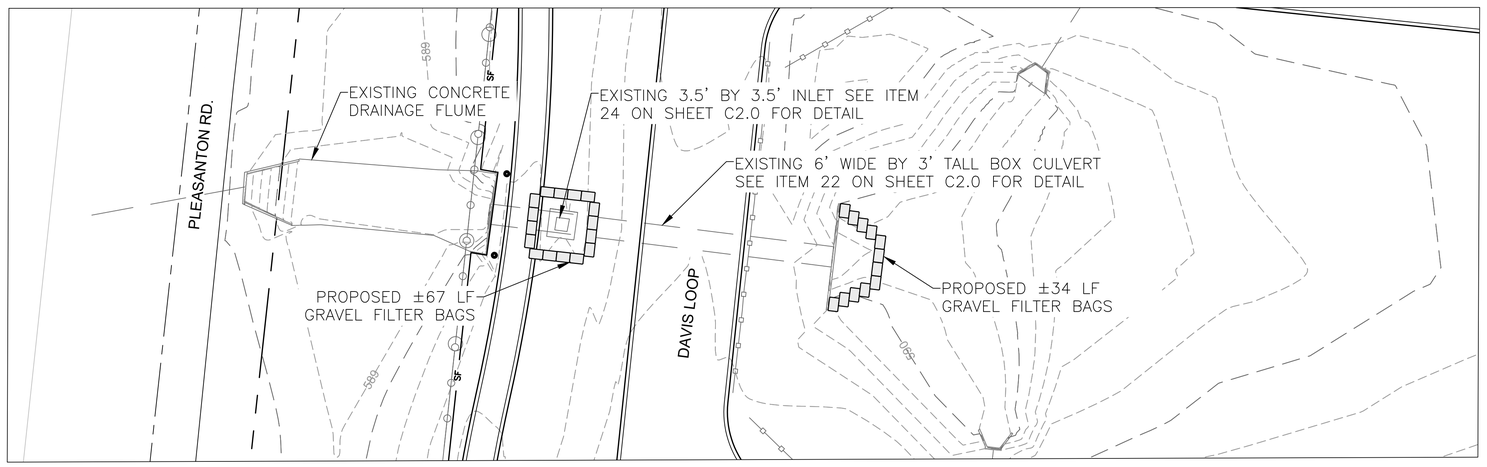
6/16/2025 1:55:01 PM M:\2022\22-069 COSA Training Academy Driving Track Improvements\DWG\C11-1 SWPPP DETAILS.dwg



INSET - A

0 20 40 Feet

SCALE: 1" = 20'



INSET - B

0 20 40 Feet

SCALE: 1" = 20'

LEGEND

- 1000 — EXISTING MAJOR CONTOUR
- 999 — EXISTING MINOR CONTOUR
- PROPERTY LINE
- SILT FENCE
- GRAVEL FILTER BAG (GFB)
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- CB — CATCH BASIN
- STABILIZED CONSTRUCTION ENTRANCE
- CHAINLINK FENCE
- GUARDRAIL
- INSET LOCATION

NOTES:

1. THIS PLAN IS FOR STORM WATER POLLUTION PREVENTION PURPOSE/EROSION CONTROL. ALL OTHER INFORMATION SHOWN HEREON IS FOR REFERENCE ONLY AND IS SUBJECT TO CHANGE.
2. THE LOCATION OF THE EROSION CONTROL DEVICES SHOWN ARE APPROXIMATE AND TO BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE DEVICES TO MINIMIZE ANY INTERFERENCE WITH CONSTRUCTION. ANY RELOCATION OF THE DEVICES FOR ANY REASON IS AT THE CONTRACTORS EXPENSE.
3. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS PLAN SHEET AND THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
4. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS CONCERNING STORM WATER POLLUTION PREVENTION AND EROSION CONTROL. CONTRACTOR SHALL SUBMIT ALL REQUIRED FORMS AND DOCUMENTS TO THE APPROPRIATE FEDERAL, STATE, AND LOCAL AGENCIES.
5. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY BY THE CONTRACTOR AND AFTER ALL MAJOR RAIN EVENTS OR MORE FREQUENTLY AS NEEDED.

SW3P BEST MANAGEMENT PRACTICES (BMP) PROJECT PHASING

1. INSTALL ALL SW3P BMP ITEMS.
2. PROTECT TREES TO REMAIN. DEMOLISH/SAWCUT SELECTED CONCRETE AND REMOVE DESIGNATED TREES.
3. PERFORM MASS GRADING & INSTALL UTILITIES TO SITE & BUILDING.
4. CONSTRUCT BUILDING, PAVING AND LANDSCAPING.
5. AFTER VEGETATION HAS 70% COVERAGE, REMOVE SW3P BMP ITEMS.

SWPPP PLAN

SLAY ARCHITECTURE

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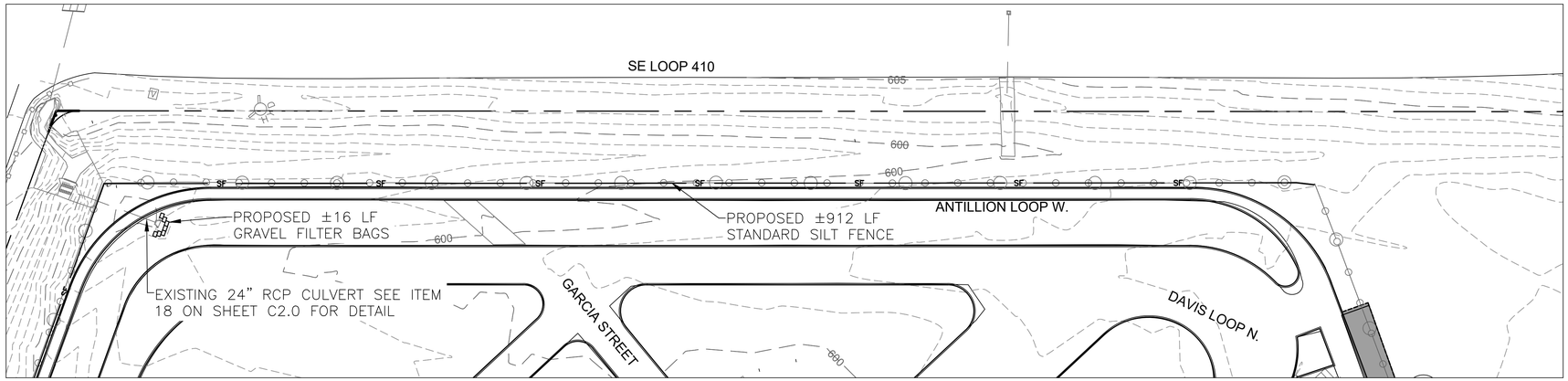
C10.1

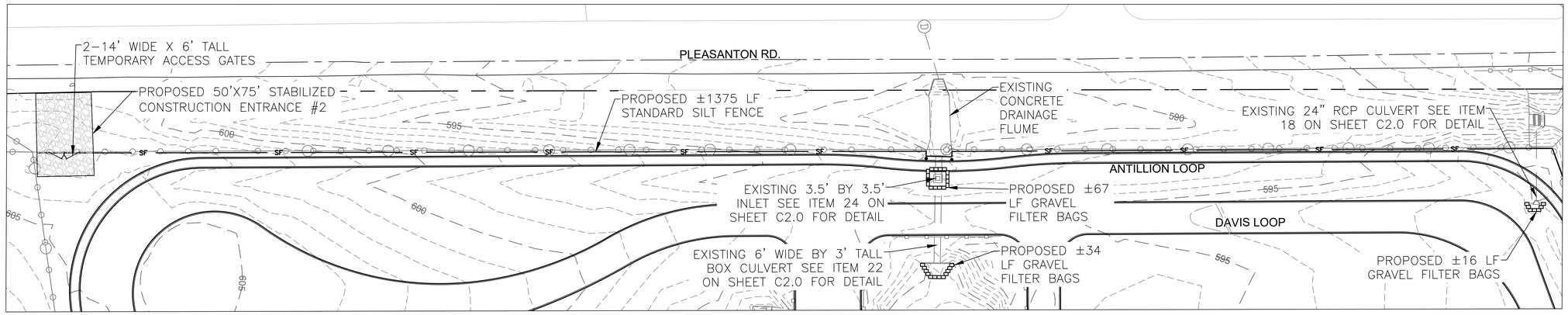
SWPPP PLAN



INSET - C

0 50 100 Feet

SCALE: 1" = 50'



INSET - D

0 50 100 Feet

SCALE: 1" = 50'

NOTES:

1. THIS PLAN IS FOR STORM WATER POLLUTION PREVENTION PURPOSE/EROSION CONTROL. ALL OTHER INFORMATION SHOWN HEREON IS FOR REFERENCE ONLY AND IS SUBJECT TO CHANGE.
2. THE LOCATION OF THE EROSION CONTROL DEVICES SHOWN ARE APPROXIMATE AND TO BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE DEVICES TO MINIMIZE ANY INTERFERENCE WITH CONSTRUCTION. ANY RELOCATION OF THE DEVICES FOR ANY REASON IS AT THE CONTRACTORS EXPENSE.
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SW3P BEST MANAGEMENT PRACTICES (BMP) PROJECT PHASING

1. INSTALL ALL SW3P BMP ITEMS.
2. PROTECT TREES TO REMAIN. DEMOLISH/SAWCUT SELECTED CONCRETE AND REMOVE DESIGNATED TREES.
3. PERFORM MASS GRADING & INSTALL UTILITIES TO SITE & BUILDING.
4. CONSTRUCT BUILDING, PAVING AND LANDSCAPING.
5. AFTER VEGETATION HAS 70% COVERAGE, REMOVE SW3P BMP ITEMS.

LEGEND

- 1000 — EXISTING MAJOR CONTOUR
- 999 — EXISTING MINOR CONTOUR
- PROPERTY LINE
- SILT FENCE
- GRAVEL FILTER BAG (GFB)
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- CB — CATCH BASIN
- STABILIZED CONSTRUCTION ENTRANCE
- CHAINLINK FENCE
- GUARDRAIL
- INSET LOCATION

SWPPP PLAN

SLAY ARCHITECTURE

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Project NO.: 22028
Date:08/30/2024
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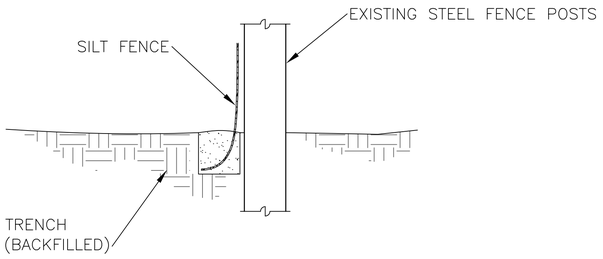
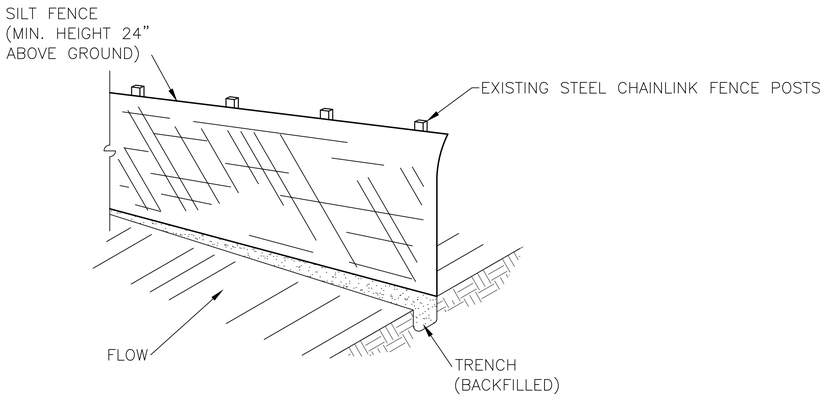
C10.2

SWPPP PLAN

3/11/2025 11:20:14 AM M:\2022\22-069 COSA Training Academy Driving Track Improvements\DWG\C11.1 SWPPP DETAILS.dwg





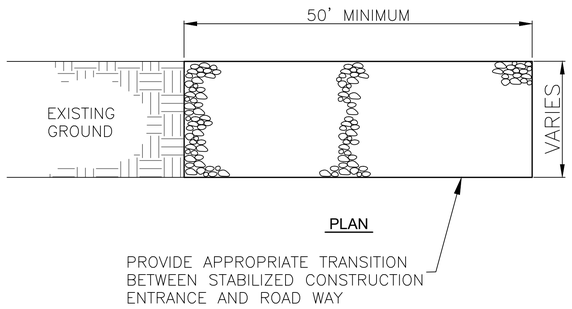
1
C10.3

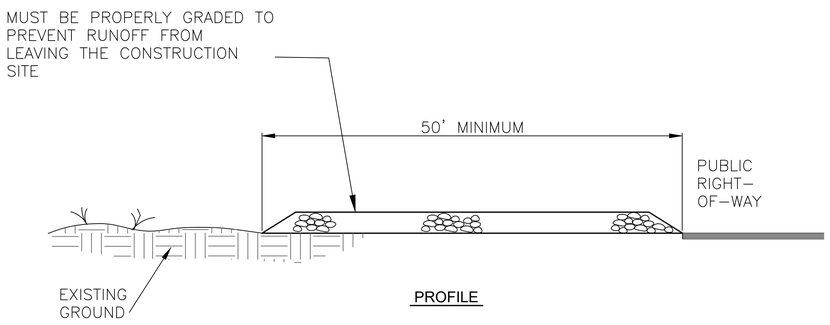
STANDARD SILT FENCE

NOT TO SCALE

GENERAL NOTES:

1. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF THE FLOW.
2. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND A MINIMUM OF 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
3. SILT FENCE SHOULD BE SECURELY FASTENED TO EXISTING CHAINLINK FENCE, WHICH IS IN TURN ATTACHED TO THE EXISTING STEEL FENCE POSTS.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
6. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE OR AS STATED IN NO. 7 ABOVE.





2
C10.3

STABILIZED CONSTRUCTION ENTRANCE AND EXIT (SCE)

NOT TO SCALE

GENERAL NOTES

1. STONE SIZE -- 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN
2. LENGTH -- AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS -- NOT LESS THAN 8 INCHES.
4. WIDTH -- NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING -- WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
6. MAINTENANCE -- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDTIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

SWPPP DETAILS

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SAPD ACADEMY TRACK PAVEMENT

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Project NO : 22028
Date:08/30/2024
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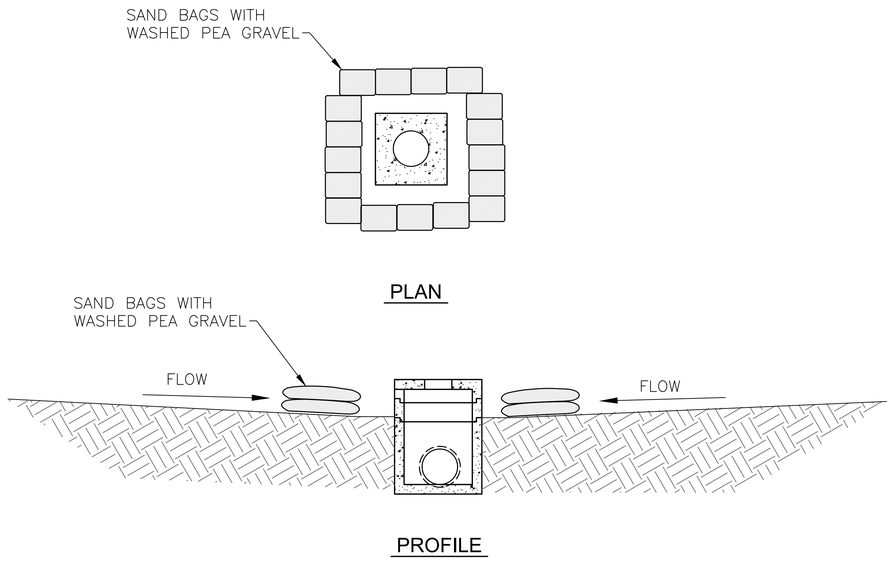
Drainage Comments - 2/24/25

C10.3
SWPPP DETAILS



1
C10.4

GRAVEL FILTER BAGS AROUND AREA INLET

NOT TO SCALE

GENERAL NOTES:

1. USE ONLY PEA GRAVEL FILLER.
2. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAIN. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY OR AS NEEDED BY THE CONTRACTOR.
3. REMOVE SEDIMENT BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
4. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

SLAY ARCHITECTURE

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STATE OF TEXAS
MICHAEL M. SLAY
44379
REGISTERED PROFESSIONAL ENGINEER
10/18/2024

100% CONSTRUCTION DOCUMENTS

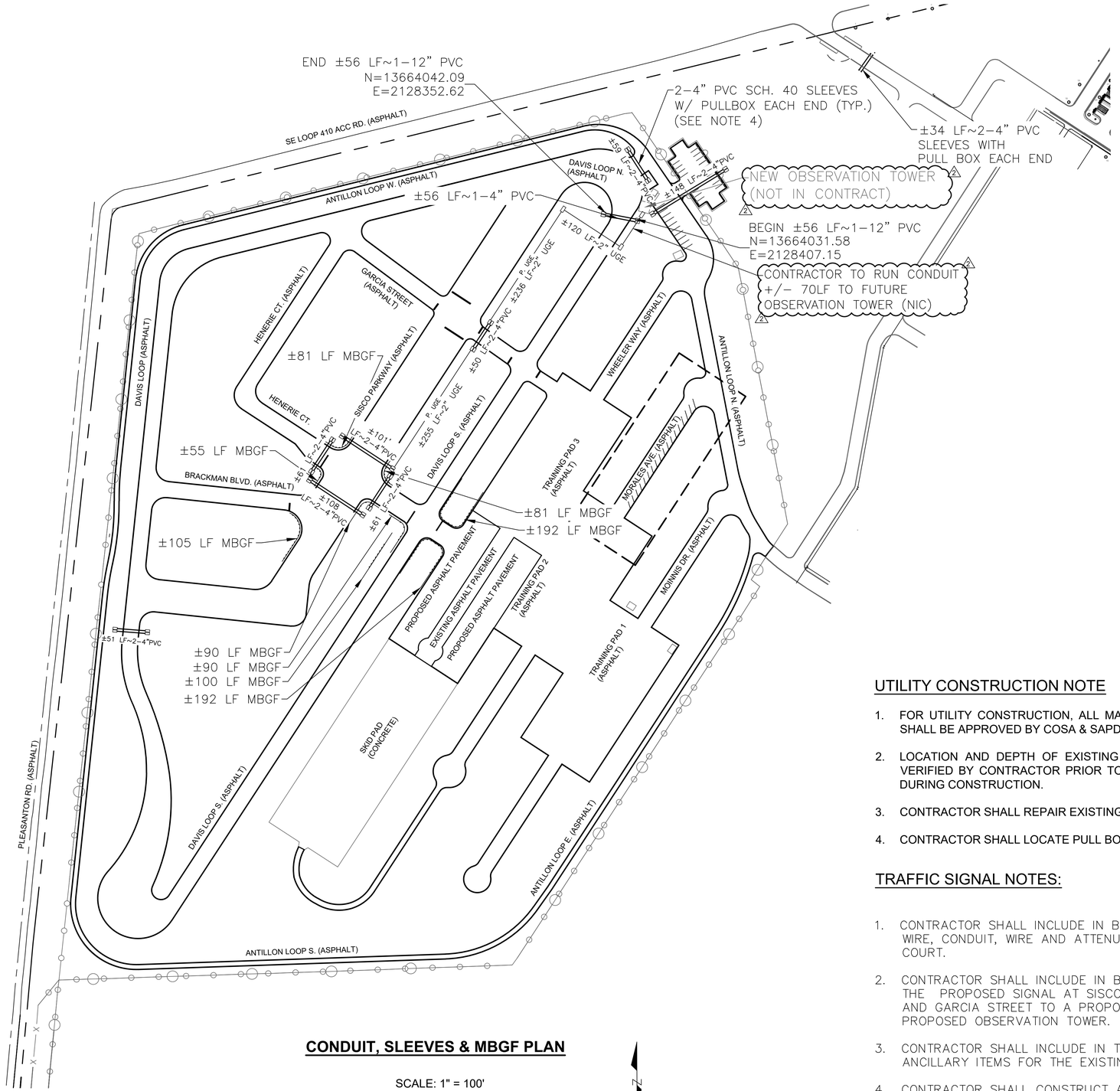
SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:08/30/2024
Revisions: Stockpile Location - 12/3/24
Drainage Comments - 2/24/25

C10.4

SWPPP DETAILS



CONDUIT, SLEEVES & MBGF PLAN

SCALE: 1" = 100'

0 100 200 Feet

N

MBGF NOTES:

1. SEE SHEET C13.0 FOR METAL BEAM GUARD FENCE DETAIL.
2. CONTRACTOR SHALL INSTALL GUARD FENCE BI-DIRECTIONAL DELINEATORS ON MBGF, SPACED 20 FT, MINIMUM 3; MOUNT APPROX. 4 FT ABOVE PAVEMENT, 2–8 FT FROM EDGE.

LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- EXISTING WHITE PAINT STRIPE
- EXISTING WHITE PAINT STRIPE DASHED
- EXISTING EDGE OF ASPHALT
- EXISTING CHAINLINK FENCE
- E. GAS — E. GAS — EXISTING GAS LINE
- 2 NEW OBSERVATION TOWER 2
- P. UGE — PROPOSED TRAFFIC SIGNAL CONDUIT
- EXISTING FIRE HYDRANT
- EXISTING GUY WIRE
- (S) EXISTING SANITARY SEWER MANHOLE
- (D) EXISTING STORM DRAIN MANHOLE
- EXISTING SIGN
- EXISTING SPRINKLER VALVE
- EXISTING TREE
- 4" SLEEVE W/ PULL BOX EACH END (UNLESS OTHERWISE SPECIFIED)

BENCHMARKS:

SURVEY CONTROL POINT "BH102"
MAG NAIL WITH WASHER
NORTHING: 13,664,041.93
EASTING: 2,127,394.46
ELEV: 600.78'

SURVEY CONTROL POINT "BH103"
MAG NAIL WITH WASHER
NORTHING: 13,662,380.92
EASTING: 2,127,237.64
ELEV: 602.12'

SURVEY CONTROL POINT "BH100"
1/2" IRON ROD WITH CAP
NORTHING: 13,663,689.06
EASTING: 2,128,794.78
ELEV: 609.23'

UTILITY CONSTRUCTION NOTE

1. FOR UTILITY CONSTRUCTION, ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY COSA & SAPD.
2. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY. ACTUAL DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
3. CONTRACTOR SHALL REPAIR EXISTING PAVEMENT REMOVED FOR 2" UGE.
4. CONTRACTOR SHALL LOCATE PULL BOXES MINIMUM 10' FROM EDGE OF PAVEMENT EACH WAY.

TRAFFIC SIGNAL NOTES:

1. CONTRACTOR SHALL INCLUDE IN BASE BID THE PROPOSED INSTALLATION OF TRAFFIC SIGNALS, POLES, SPAN WIRE, CONDUIT, WIRE AND ATTENUATION BARRELS AROUND EACH POLE AT SISCO PARKWAY AND HENERIE COURT.
2. CONTRACTOR SHALL INCLUDE IN BASE BID THE PROPOSED INSTALLATION OF 2" CONDUIT AND PULL BOX FROM THE PROPOSED SIGNAL AT SISCO PARKWAY AND HENERIE COURT TO THE EXISTING SIGNAL AT SISCO PARKWAY AND GARCIA STREET TO A PROPOSED PULL BOX AND CONTINUING TO A PULL BOX AT THE BASE OF THE PROPOSED OBSERVATION TOWER.
3. CONTRACTOR SHALL INCLUDE IN THE BASE BID THE COST TO REMOVE THE EXISTING CONTROLLER AND ANCILLARY ITEMS FOR THE EXISTING TRAFFIC SIGNAL.
4. CONTRACTOR SHALL CONSTRUCT A TRAFFIC SIGNAL SYSTEM THAT OPERATES BOTH THE PROPOSED SIGNAL AND EXISTING SIGNAL FROM A CONTROLLER LOCATED WITHIN THE (2 NEW) OBSERVATION TOWER.
5. THE $160,000 ALLOWANCE PROVIDED IN THE BID SHALL PROVIDE FOR A NEW 2070LX CONTROLLER IN SPECIAL 336 MC CAIN TRAFFIC CONTROL CABINET, SIMULATOR/POLICE PANEL, RELAYS, HARDENED POWER SUPPLY, WIRELESS BRIDGE UNIT AND ALL ANCILLARY ITEMS NECESSARY FOR A FULLY OPERATIONAL TRAFFIC CONTROL SYSTEM THAT OPERATES BOTH TRAFFIC SIGNALS FROM THE (2 NEW) OBSERVATION TOWER.
6. CONTRACTOR SHALL INCLUDE IN THE BASE BID 6 ATTENUATION BARRELS AS SPARES FOR SAN ANTONIO POLICE DEPARTMENT (SAPD).

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100% CONSTRUCTION DOCUMENTS

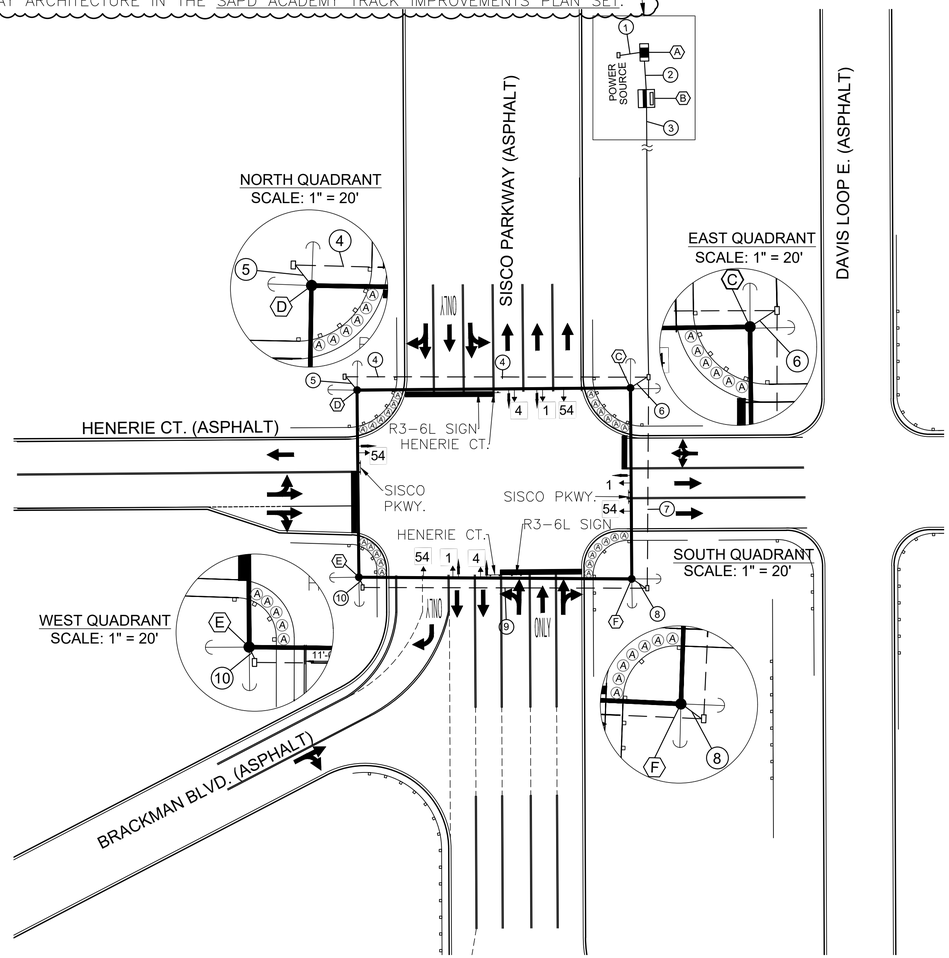
SAPD ACADEMY TRACK PAVEMENT

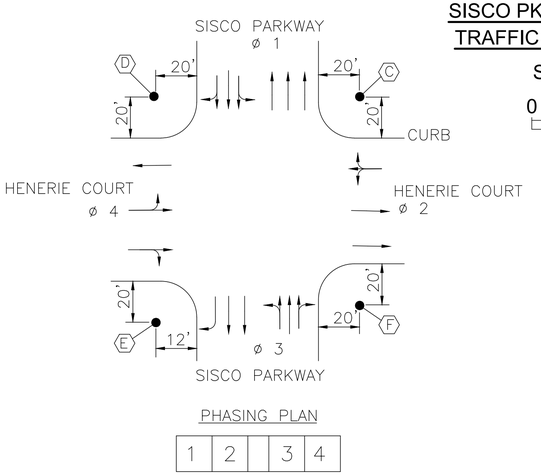
12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

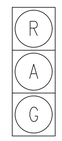
Project NO.: 22028
Date:9/9/2025
Revisions: "Addenda No. 1" - 8/22/25
"Addenda No. 2" - 9/9/2025

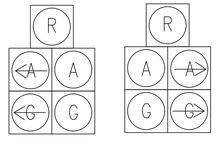
C11.0

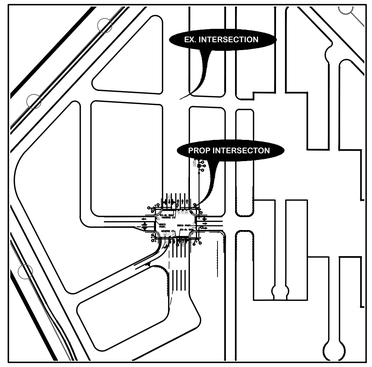
CONDUIT, SLEEVES & MBGF PLAN











CONTROLLER SHOWN SCHEMATICALLY ON THIS SHEET FOR REFERENCE ONLY. FINAL CONTROLLER LOCATION TO BE COORDINATED WITH ARCHITECTURAL PLANS NOT IN CONTRACT AND WILL BE INSTALLED IN THE NEW OBSERVATION TOWER AS DESIGNED BY SLAY ARCHITECTURE IN THE SAPD ACADEMY TRACK IMPROVEMENTS PLAN SET.

SISCO PKWY. AND HENERIE CT. TRAFFIC SIGNALIZATION PLAN

SCALE: 1" = 30'

0 30 60 Feet

PHASING PLAN

1	2	3	4

PROGRAM

NOTE:
INTERSECTION SIGNALS CAN BE PROGRAMMED WITH THROUGH TRAFFIC AND PERMISSIVE LEFT TURNS.

GENERAL NOTES:

LOCATE NEW WOOD STRAND WIRE SIGNAL POLES, ALL AT SAME DISTANCE OFF NEW CURBS (20' TO PROVIDE CLEARANCE FROM PAVEMENT AND VEHICLES)

NOTES:

- Ⓐ NEW SERVICE PEDESTAL
- Ⓑ NEW 2070 LINUX CONTROLLER IN 336 CABINET (PROGRAMMED BY CONTRACTOR) - LOCATED IN OBSERVATION TOWER
- Ⓒ NEW WOOD POLE WITH TWO GUY WIRES FOR ZINC COAT STL WIRE STRAND
- Ⓓ NEW WOOD POLE WITH TWO GUY WIRES FOR ZINC COAT STL WIRE STRAND
- Ⓔ NEW WOOD POLE WITH TWO GUY WIRES FOR ZINC COAT STL WIRE STRAND
- Ⓕ NEW WOOD POLE WITH TWO GUY WIRES FOR ZINC COAT STL WIRE STRAND
- Ⓖ REFER TO SHEET C11.0 FOR CONDUIT TO OBSERVATION TOWER

SIGNAL FACES

ø1 RED
ø2 RED
ø3 RED
ø4 RED

FLASH SEQUENCE
(ALL RED)

ADD SIGN ADJACENT EACH SIGNAL HEAD ON MAST ARM:

LOCATION MAP
1" = 200'

SIGNALIZATION LEGEND

#3 1/2 PULLBOX	◇	STREET LIGHT WITH ARM	
#5 PULLBOX	□	TRAFFIC SIGNAL ON SPAN	
#7 PULLBOX	▭	TRAFFIC SIGNAL ON ARM	
WOOD POLE	○	TRAFFIC WITH BACKPLATE	
STEEL POLE WITH ARM		COMBINATION ST. LIGHT/SIGNAL POLE	
CONTROLLER ON PEDESTAL	▣	SIGNAL WITH LEFT TURN ARROW	
CONTROLER ON FOUNDATION		PEDESTRIAN SIGNAL ON POLE	
SERVICE POLE WITH METER		PEDESTRIAN SIGNAL AND BUTTON ON POLE	
SERVICE PEDESTAL CABINET		FLASHING SIGNAL AMBER	
RAILROAD CABINET		FLASHING SIGNAL RED	
GUY AND ANCHOR	→	POLE IDENTIFIER	Ⓐ
SIGNAL CONDUIT		CONDUIT IDENTIFIER	①
TELEPHONE LINE U.G.	T	SIGNAL HEAD IDENTIFIER	1
TELEPHONE LINE O.H.	OH T	PEDESTRIAN BUTTON ON SIGNAL POLE	
SEWER LINE	S		
STORM DRAIN LINE	SD	LOOP IDENTIFIER	6 L 1 PHASE LANE SET
ELECTRIC LINE U.G.	E		
ELECTRIC LINE O.H.	O.H. E	MAST ARM	
GAS LINE	G	CAMERA DETECTION	
CABLE T.V. LINE U.G.	CATV	ATTENUATION BARRELS	Ⓐ
CABLE T.V. LINE O.H.	O.H. TV		
PROPERTY LINE			
FENCE LINE			
WOOD FENCE			

TRAFFIC SIGNALIZATION – CONDUIT SCHEDULE FOR SAPD TRAINING ACADEMY DRIVING TRACK, SAN ANTONIO, TEXAS

	CONDUIT RUN NUMBER	1	2	3	4	5	6	7	8	9	10	
	CONDUIT SIZE IN INCHES	(2) 2	2	(2) 3	3	3	3	3	3	3	3	
	CONDUIT RUN TYPE	T	T	T	T	T	T	T	T	T	T	E–EXISTING B–BORED T–TRENCHED
IMSA CABLE #14 7–COND.	SIGNALS: ø 3 FROM Ⓒ POLE			1			1					
	SIGNALS: ø 2 FROM Ⓓ POLE			1	1	1						
	SIGNALS: ø 1 FROM Ⓔ POLE			1				1		1	1	
	SIGNALS: ø 4 FROM Ⓕ POLE			1				1	1			
IMSA CABLE #14 9–COND.	Ⓒ											
	Ⓓ											
	Ⓔ											
	Ⓕ											
#8 SOLID BARE	BARE BOND GROUND	+	1	1	1	1	1	1	1	1	1	
#6 THWN	120 V POWER HOT	+	1									
	120 V POWER GROUND	+	1									
2 IN 1 COMM. CABLE & POWER SUPPLY												
SSR COMM. CABLE												
	COMMUNICATION CABLE											

SLAY ARCHITECTURE

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MICHAEL M. SLAY
44379

Michael Slay 10/18/2024

100% CONSTRUCTION DOCUMENTS

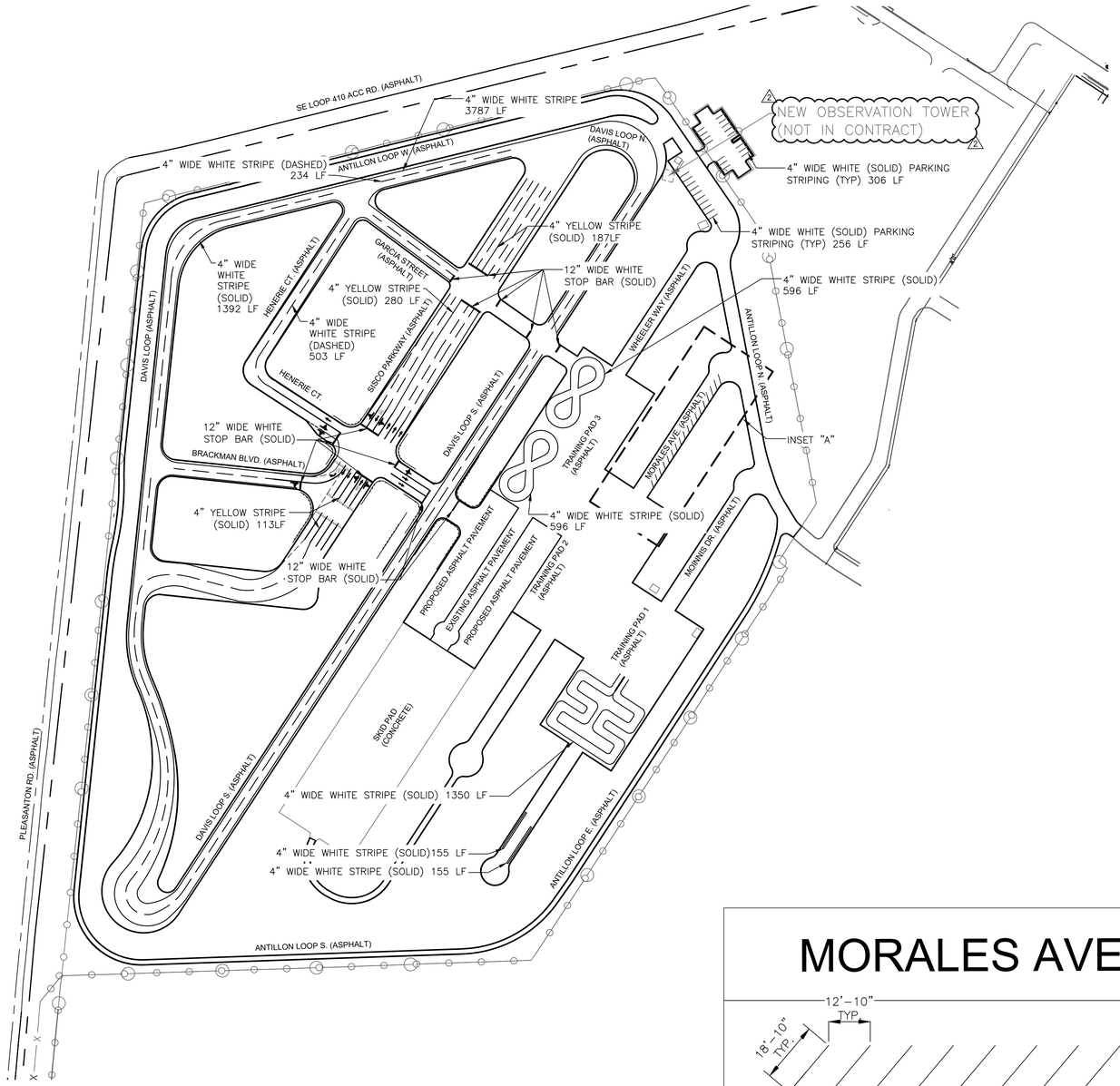
SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date: 9/9/2025
Revisions: "Addenda No. 1" - 8/22/25
"Addenda No. 2" - 9/9/2025

C11.1

TRAFFIC SIGNAL



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- EXISTING WHITE PAINT STRIPE
- EXISTING WHITE PAINT STRIPE DASHED
- EXISTING EDGE OF ASPHALT
- EXISTING CHAINLINK FENCE

STRIPING NOTES:

1. A STRIPING SHALL BE USED TO INDICATE PARKING SPACES, NO PARKING, AND LANE STRIPING AREA. PARKING SPACE SHALL BE INDICATED BY FOUR INCHES (4") PAINTED WHITE STRIPED, NINE FEET TO TEN FEET (9'–10') ON CENTER. NO PARKING AREA SHALL BE NOTED BY 4 INCH WHITE LINES WITH FORTY–EIGHT INCHES (48") SEPARATION, PAINTED DIAGONALLY ACROSS THE AREA. LANE STRIPING SHALL BE FOUR FEET (4') PAINTED WHITE STRIPING. UNLESS OTHERWISE SPECIFIED.
2. ALL 4" STRIPING IS WHITE UNLESS OTHERWISE SPECIFIED.

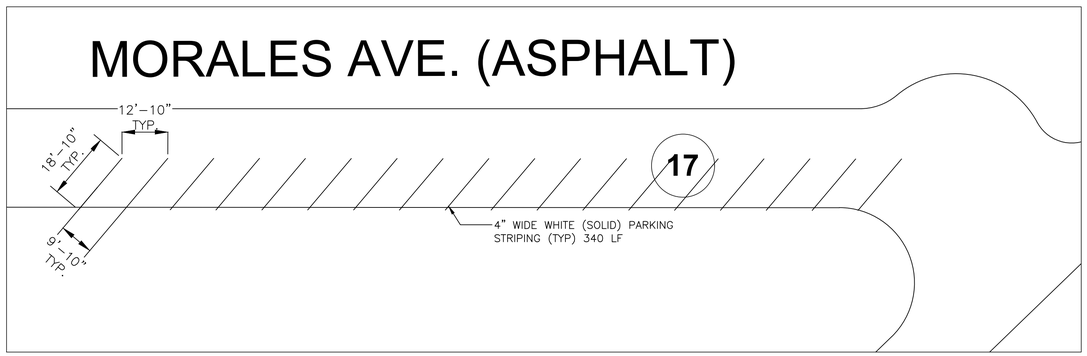
TOTAL STRIPING LENTGTHS:

1. 4" WHITE SOLID LINE (THERMOPLASTIC) – 14,268 LF
2. 4" WHITE DASHED LINE (THERMOPLASTIC) – 5,582 LF
3. 4" YELLOW SOLID LINE (THERMOPLASTIC) – 574 LF
4. 12" WIDE WHITE STOP BAR (THERMOPLASTIC)– 304 LF
5. 4" WHITE PARKING SOLID LINE (THERMOPLASTIC) – 904 LF

STRIPING PLAN

0 100 200 Feet

SCALE: 1" = 100'



INSET "A"

0 20 40 Feet

SCALE: 1" = 20'

SLAY ARCHITECTURE

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100% CONSTRUCTION DOCUMENTS

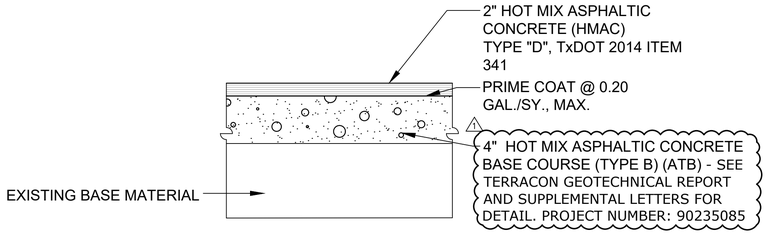
SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:9/9/2025
Revisions: *Addenda No. 1* - 8/22/25
Addenda No. 2 - 9/9/2025

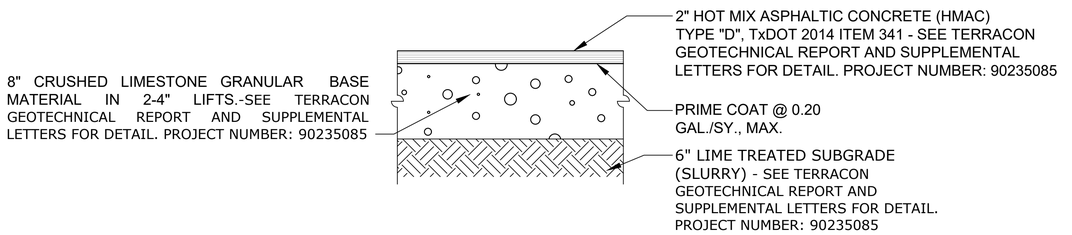
C11.2

STRIPING PLAN



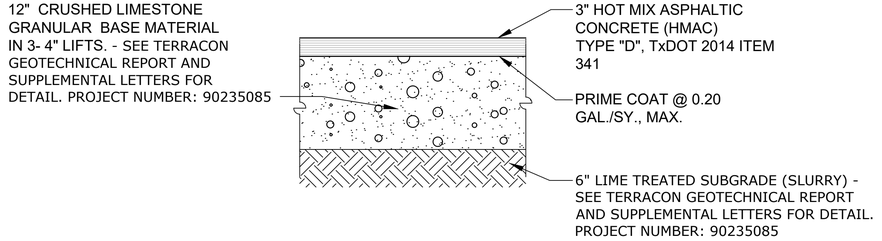
1 C12.0 OPTION 2 PADS AND TRACK AREA ASPHALT PAVEMENT

NOT TO SCALE



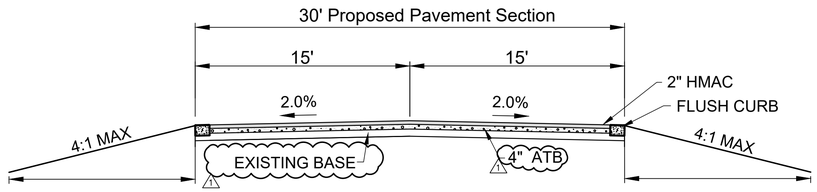
3 C12.0 PARKING AREA ASPHALT PAVEMENT

NOT TO SCALE



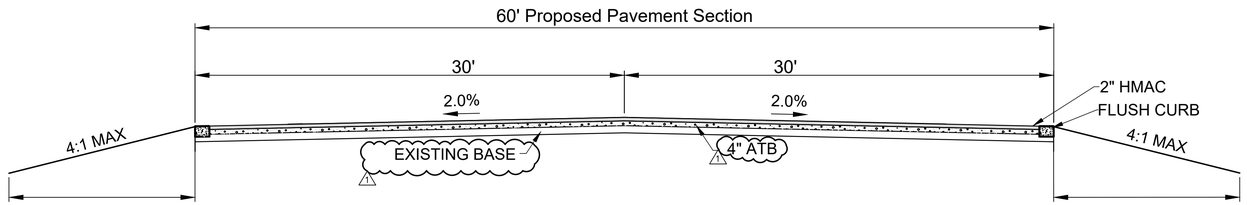
4 C12.0 NEW TRACK/ANTILLON LOOP ASPHALT PAVEMENT FULL DEPTH RECONSTRUCTION

NOT TO SCALE



A C12.0 SECTION "A-A"

SCALE: 1" = 5'



B C12.0 SECTION "B-B"

SCALE: 1" = 5'

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10/18/2024

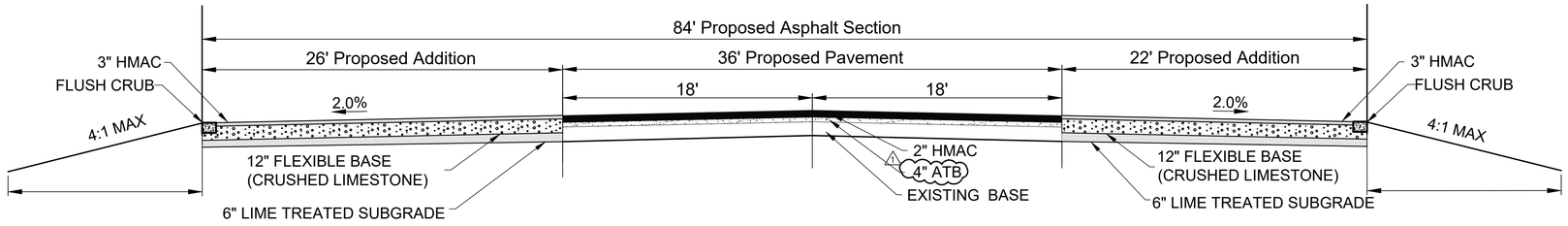
100% CONSTRUCTION DOCUMENTS

SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

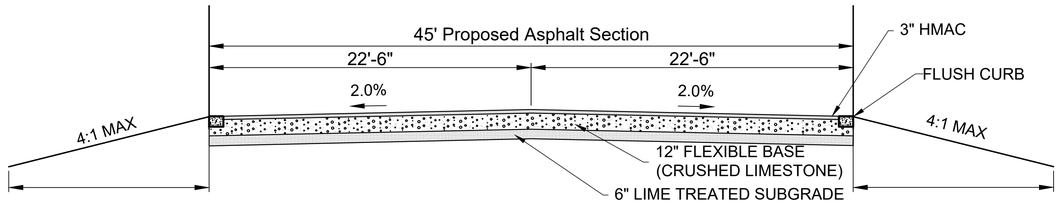
Project NO.: 22028
Date:8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

C12.0
CROSS SECTIONS



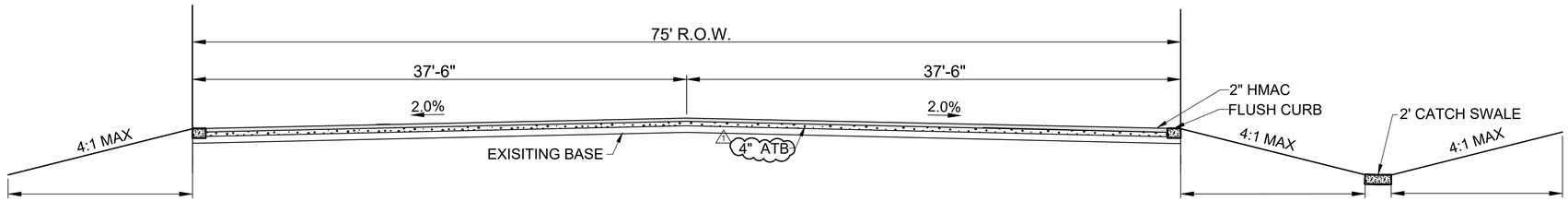
C12.1 — SECTION "C-C"

SCALE: 1" = 5'



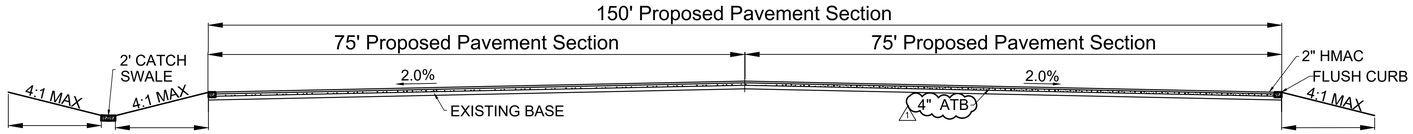
C12.1 — SECTION "D-D"

SCALE: 1" = 5'



C12.1 — SECTION "E-E"

SCALE: 1" = 5'



C12.1 — SECTION "F-F"

SCALE: 1" = 10'

8/21/2025 5:44:51 PM M:\2022\22-069 COSA Training Academy Driving Track Improvements\DWG\C13.0 DETAILS.dwg

SLAY ARCHITECTURE

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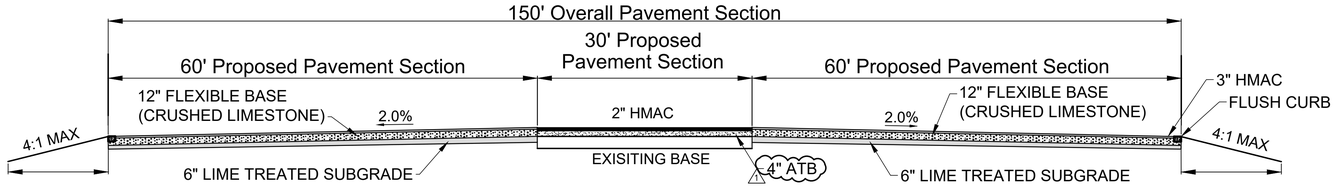
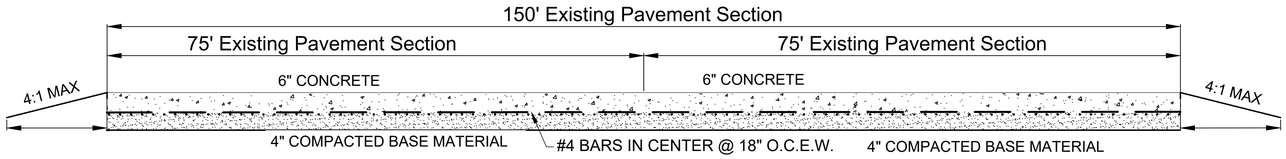
C12.1

CROSS SECTIONS



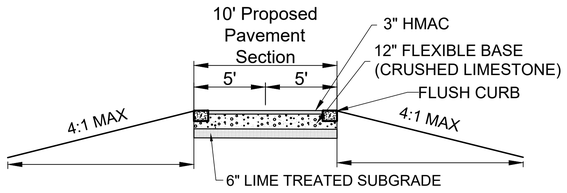
G C12.2 SECTION "G-G"

SCALE: 1" = 10'



H C12.2 SECTION "H-H "

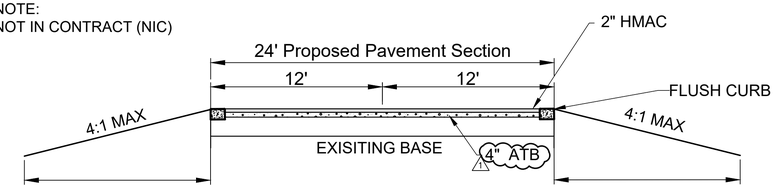
SCALE: 1" = 10'



I C12.2 SECTION "I-I"

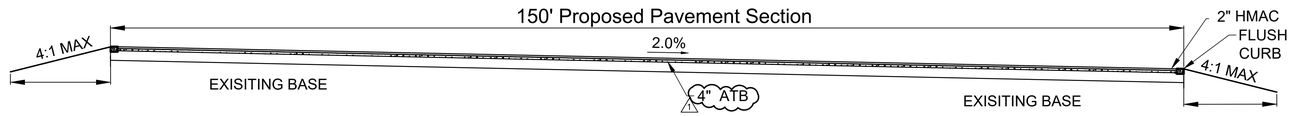
SCALE: 1" = 5'

NOTE:
NOT IN CONTRACT (NIC)



J C12.2 SECTION "J-J"

SCALE: 1" = 5'



K C12.2 SECTION "K-K"

SCALE: 1" = 10'

8/21/2025 5:43:49 PM M:\2022\22-069 COSA Training Academy Driving Track Improvements\DWG\C13.0 DETAILS.dwg

SLAY ARCHITECTURE

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10/18/2024

100% CONSTRUCTION DOCUMENTS

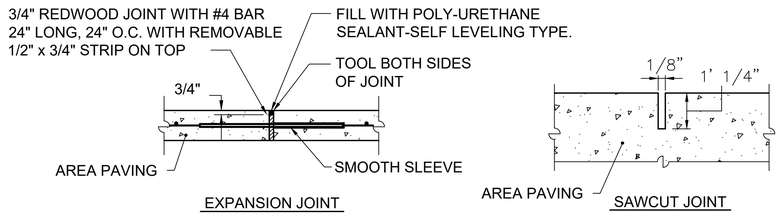
SAPD ACADEMY TRACK PAVEMENT

12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

Project NO.: 22028
Date:8/22/2025
Revisions: "Addenda No. 1" - 8/22/25

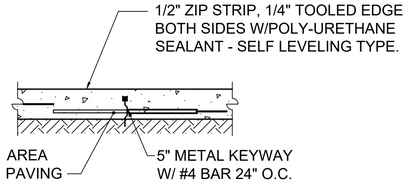
C12.2

CROSS SECTIONS



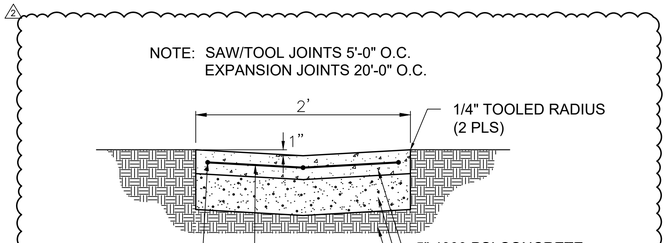
GENERAL NOTES:
SAWCUT JOINTS BETWEEN 18 AND 24 HOURS AFTER CONCRETE POUR.

1 C12.3 CONTROL JOINTS
NOT TO SCALE

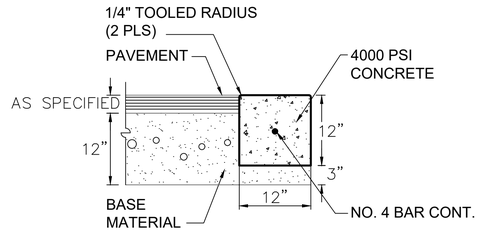


GENERAL NOTES:
CONSTRUCTION JOINTS TO BE USED ON PIPE CHASES AND BETWEEN CONCRETE POURS ONLY.

2 C12.3 CONSTRUCTION JOINT
NOT TO SCALE

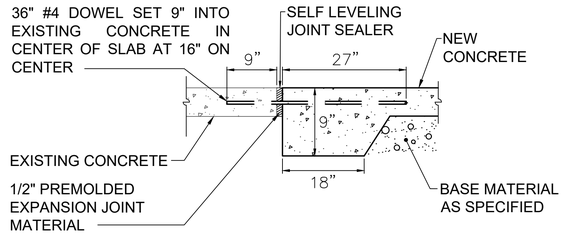


3 C12.3 2" CATCH SWALE
NOT TO SCALE

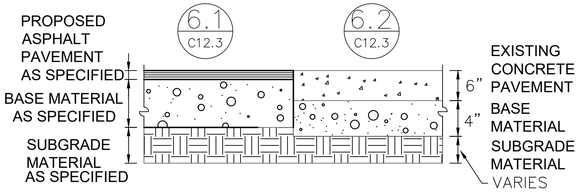


GENERAL NOTES:
SAW JOINTS 10' ON CENTER AND EXPANSION JOINTS AT 40' ON CENTER. WHERE CURB ABUTS SIDEWALKS AND OR CONCRETE PAVEMENT, JOINTS SHALL MATCH UNLESS OTHERWISE SHOWN ON PLANS.

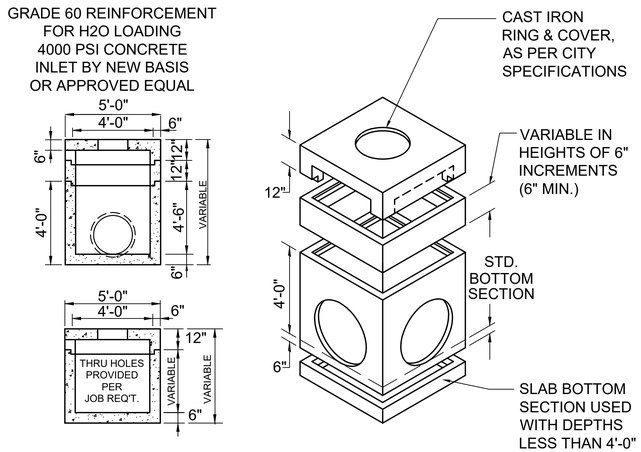
4 C12.3 FLUSH CURB
NOT TO SCALE



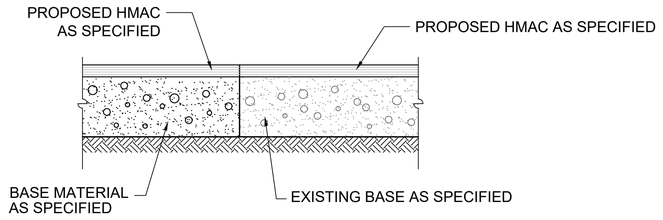
5 C12.3 NEW CONCRETE TO EXISTING CONCRETE
NOT TO SCALE



6 C12.3 CONCRETE TO ASPHALT PAVEMENT
NOT TO SCALE

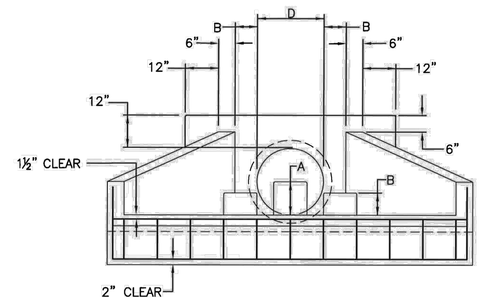


8 C12.3 4'-0"x4'-0" VAR. CURB INLET OR "Y"INLET
NOT TO SCALE



7 C12.3 NEW ASPHALT TO EXISTING ASPHALT
NOT TO SCALE

GENERAL NOTES:
TACK COAT SHALL CONFORM TO COSA ITEM 203 AND BE APPLIED TO ALL EXISTING ASPHALT SURFACES PRIOR TO PLACEMENT OF NEW HMAC.



SECTION B–B

NOTES:

1. ALL CONCRETE SHALL BE TYPE "C" AS PER SPEC. 403S, CONCRETE FOR STRUCTURES.
2. CHAMFER ALL EXTERNAL VISIBLE CORNERS.
3. DISSIPATOR BLOCKS REQUIRED ON DISCHARGE HEADWALLS ONLY.

D	18"	21"	24"	27"	30"	33"	36"	42"	48"	54"	60"
A	9"	10"	12"	14"	15"	16"	18"	21"	24"	27"	30"
B	6"	7"	8"	9"	10"	11"	12"	14"	16"	18"	20"
C	90"	105"	120"	135"	150"	165"	180"	210"	240"	270"	300"
L	54"	63"	72"	81"	90"	99"	108"	126"	144"	162"	180"
E	12"	14"	16"	18"	20"	22"	24"	28"	32"	36"	40"

DISCHARGE VELOCITIES GREATER THAN 3 METERS/SECOND (10 fps) REQUIRE ROCK OUTLET PROTECTION.

9 C12.3 STANDARD HEADWALL AND ENERGY DISSIPATORS
NOT TO SCALE

PAVEMENT DETAILS

SLAY ARCHITECTURE
SAN ANTONIO
123 Altgelt Avenue
San Antonio, Texas 78201
T: 210.736.3009
LAREDO
9901 McPherson Avenue, #104
Laredo, Texas 78045
T: 956.791.0405

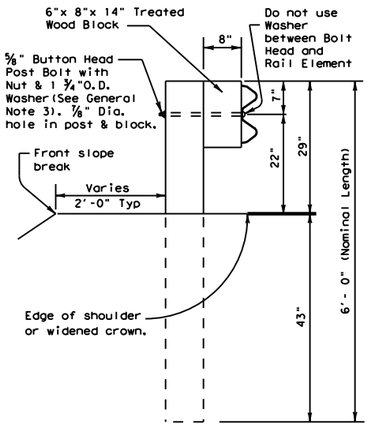
STATE OF TEXAS
MICHAEL M. SLAY
44379
REGISTERED
PROFESSIONAL ENGINEER
10/18/2024

100% CONSTRUCTION DOCUMENTS
SAPD ACADEMY TRACK PAVEMENT
12200 SE. LOOP 410, SAN ANTONIO, TEXAS 78214

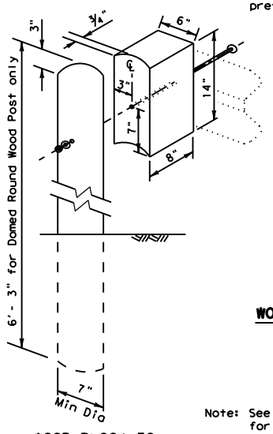
Project NO.: 22028
Date:9/9/2025
Revisions: "Addenda No. 1" - 8/22/25
"Addenda No. 2" - 9/9/2025

C12.3
PAVEMENT DETAILS

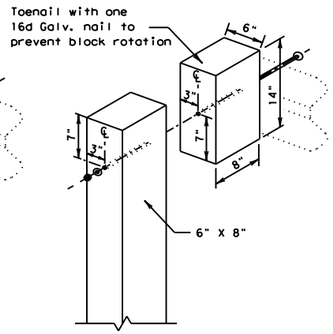
DATE:
FILE:



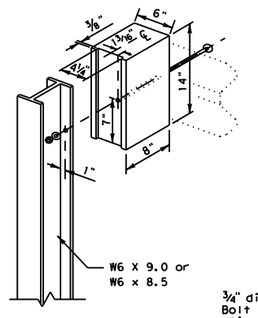
TYPICAL POST



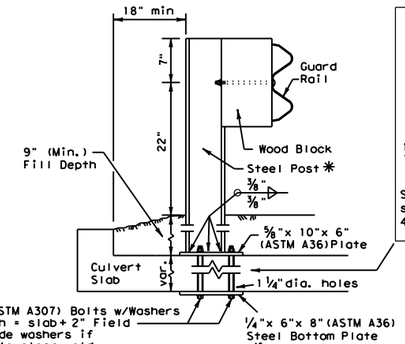
WOOD BLOCK TO ROUND WOOD POST



WOOD BLOCK TO RECTANGULAR WOOD POST

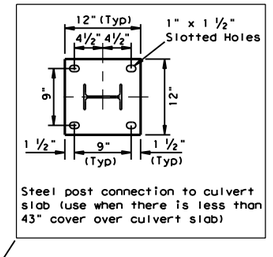


WOOD BLOCK TO STEEL POST

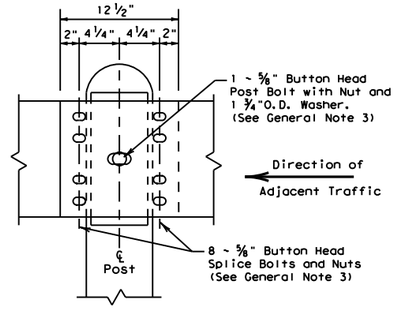


*** LOW FILL CULVERT POST**

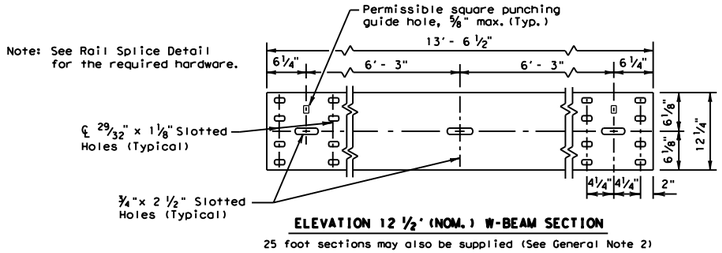
FOR USE ON NON-BRIDGE CLASS CULVERTS ONLY



* Post(s) may require field modifications to ensure proper guardrail height.



RAIL SPLICE DETAIL

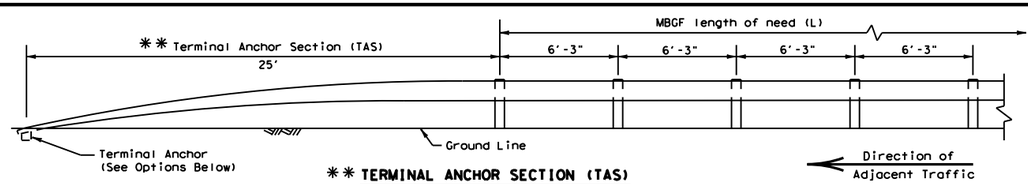


ELEVATION 12½' (NOM.) W-BEAM SECTION

25 foot sections may also be supplied (See General Note 2)

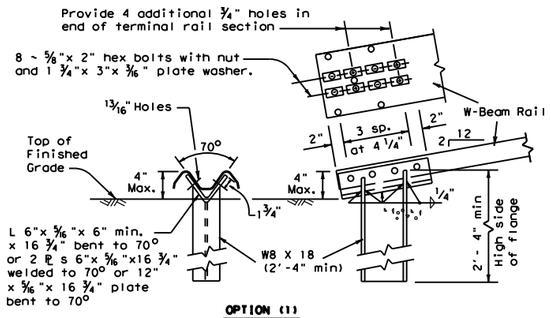
GENERAL NOTES

1. The type of post (round wood post, rectangular wood post, or steel post) will be shown elsewhere in the plans. The exact position of MBGF shall be shown elsewhere in the plans or as directed by the Engineer. Steel posts to be galvanized in accordance with Item 445, "Galvanizing."
2. Rail element shall meet the requirements of Item 540, "Metal Beam Guard Fence" except as modified on the plans. The Contractor may furnish rail elements of 12½ or 25 foot nominal lengths.
3. Button head "post" bolts (ASTM A307) shall be of sufficient length to extend through the full thickness of the nut (ASTM A563) and Type A (1¾" O.D.) washer and not more than 1" beyond it. Button head "splice" bolts (ASTM A307) are ⅝" x 1¼" (or 2" long at triple rail splices) with a ⅝" double recessed nut (ASTM A563).
4. Fittings (bolts, nuts, and washers) shall be galvanized in accordance with Item 445, "Galvanizing." Fittings shall be subsidiary to the bid item.
5. Crown shall be widened to accommodate the Metal Beam Guard Fence.
6. The lateral approach to the guard fence, shall have a slope rate of not more than 1V:10H.
7. Unless otherwise shown in the plans, guard fence placed in the vicinity of curbs shall be positioned so that the face of curb is located directly below or behind the face of the block. Rail placed over curbs shall be installed so that the post bolt is located approximately 21 inches above the gutter pan or roadway surface.
8. If solid rock is encountered within 0 to 18" of the finished grade, drill a 22" dia. hole, 24" into the rock, or drill two 12" dia. front to back overlapping holes, 24" into the rock. If solid rock is encountered below 18", drill a 12" dia. hole, 12" into the rock or to the standard embedment depth, whichever is less. Any excess post length, after meeting these depths, may be field cut to ensure proper guardrail mounting height. Backfill with a cohesionless material.
9. Posts shall not be set in concrete, of any depth.
10. Special fabrication will be required at installations having a curvature of less than 150 ft. radius.
11. The terminal anchor section (TAS) post shall be set in Class A concrete (unless otherwise shown in the plans) in accordance with Item 421, "Hydraulic Cement Concrete." Concrete shall be subsidiary to the bid item requiring construction of the terminal anchor section (TAS). Terminal anchor post to be galvanized in accordance with Item 445, "Galvanizing."
12. Unless otherwise shown in the plans, a composite material post and/or block that meets the requirements of DMS-7210, "Composite Material Posts and Blocks for Metal Beam Guard Fence" may be substituted for posts and/or blocks of similar dimensions. The Construction Division, TxDOT maintains a Material Producer List (MPL) for producers of materials conforming to DMS-7210. Only producers on the MPL can furnish composite material posts and/or blocks.



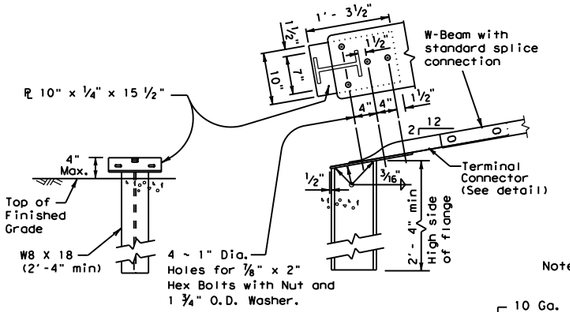
**** TERMINAL ANCHOR SECTION (TAS)**

Terminal anchor sections are only for downstream use, when located outside the horizontal clearance area of opposing traffic.



OPTION (1)

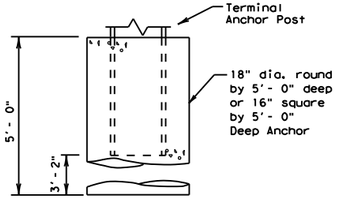
Note: This anchor post requires four additional ¾" holes (shop or field) in the rail member with eight ⅝" hex bolts with nut and plate washer.



OPTION (2)

Note: This anchor post requires the use of the 10 ga. terminal connector with four ⅞" hex bolts with nut and washer.

TERMINAL ANCHOR POST OPTIONS
(See General Note 11)



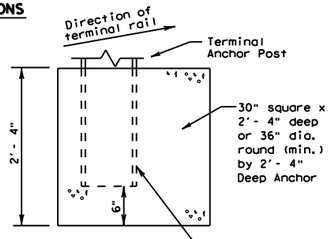
Notes:

Either concrete anchor may be used with either post option above.

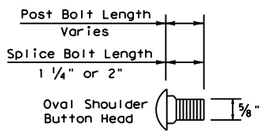
No construction joint is allowed in the concrete anchor.

Terminal rail may be bolted to post and in twist position prior to placing concrete anchor.

If concrete anchor is precast, the area should be compacted as directed by the Engineer, when placed in the field.



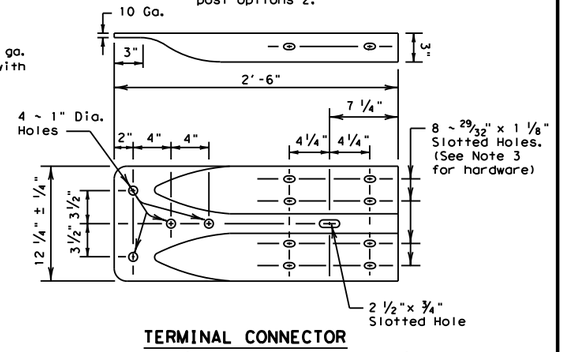
TERMINAL CONCRETE ANCHOR OPTIONS
(See General Note 11)



BUTTON HEAD BOLT

Post and Splice Bolts
(See General Note 3)

Note: Terminal Connector to be used with terminal anchor post options 2.



TERMINAL CONNECTOR

For connection hardware to concrete rails, see the MBGF transition standards.

ONLY FOR USE IN MAINTENANCE REPAIRS OR HIGHLY CONSTRAINED SITE CONDITIONS.

Texas Department of Transportation

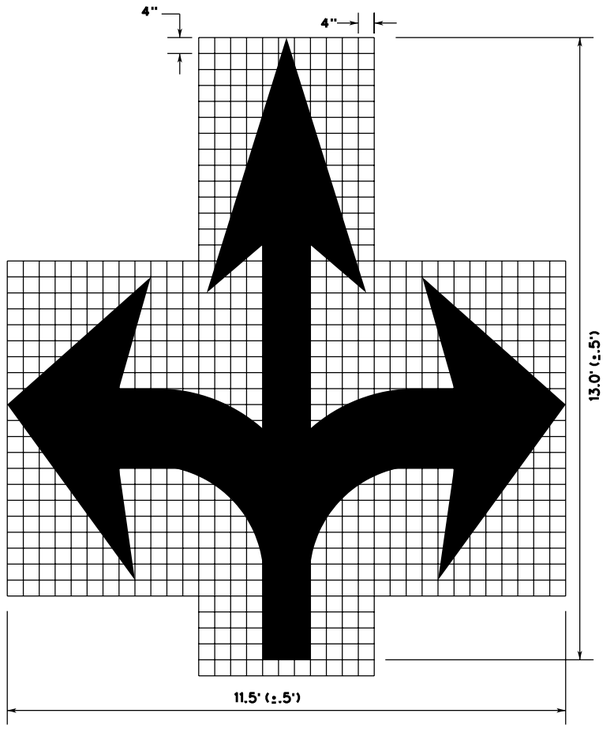
Design Division Standard

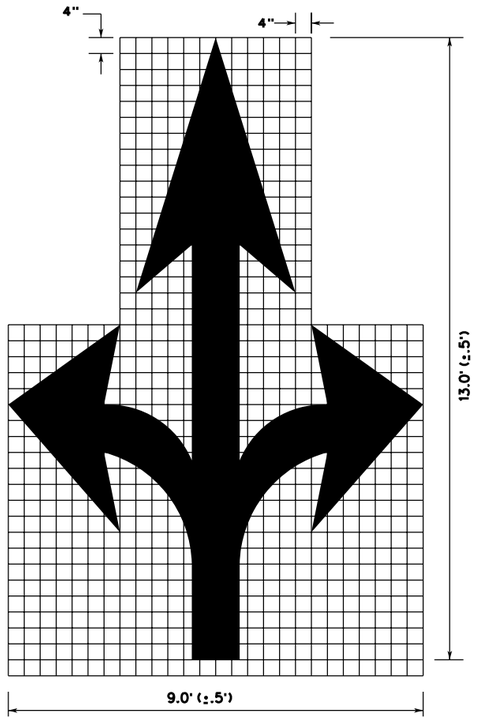
METAL BEAM GUARD FENCE

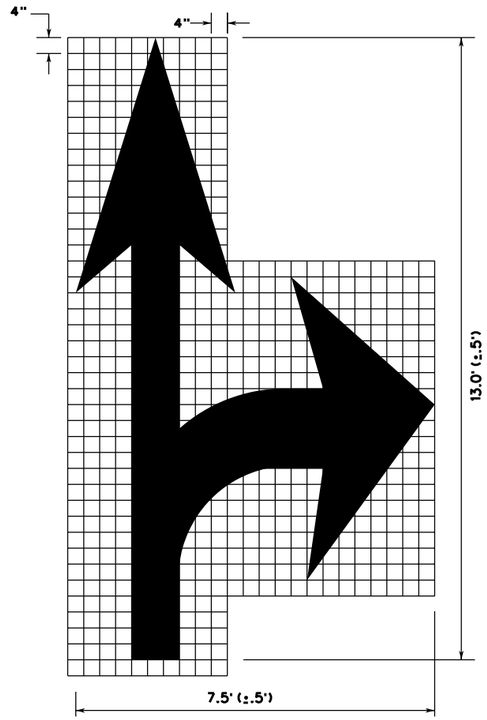
MBGF-19

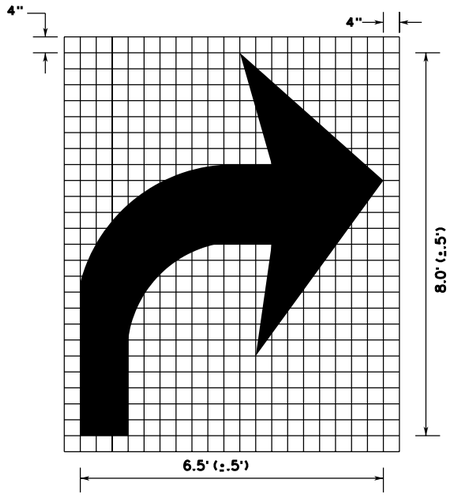
FILE: mbgf19.dgn	DN: TxDOT	CK: KM	DW: BD	CK: VP
©TxDOT NOVEMBER 2019	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.

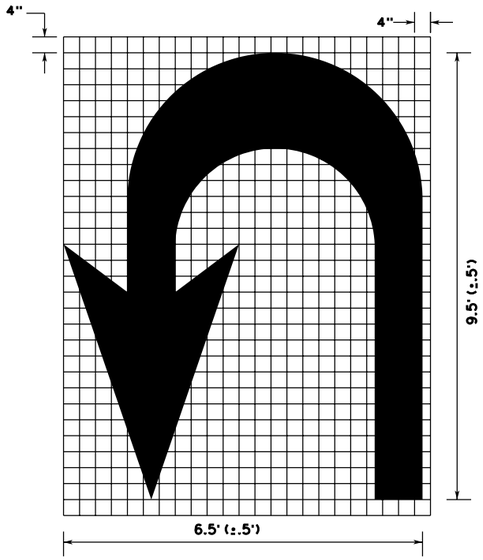
C13.0

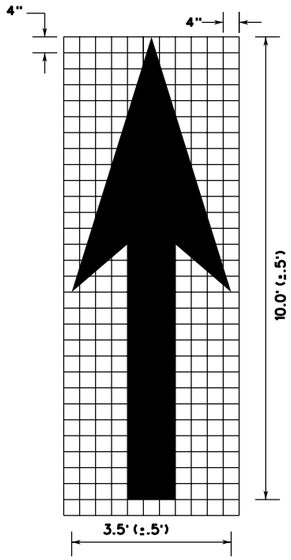


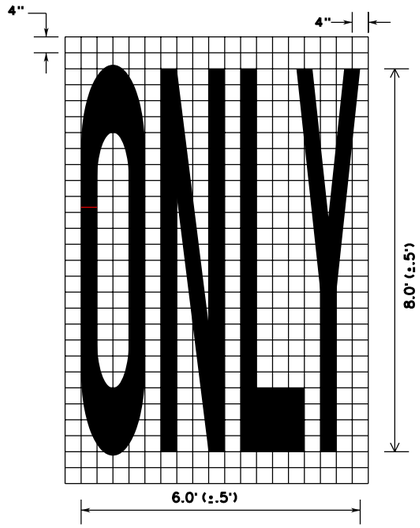












NOTES:

1. MINIMUM 8 FOOT WHITE MARKINGS SHALL BE USED, UNLESS OTHERWISE NOTED. IF MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD BE PLACED WITH FIRST WORD NEAREST THE DRIVER.

2. THESE DETAILS ARE STANDARD SIZE FOR NORMAL INSTALLATION: SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD DEPENDING ON CONDITIONS.

3. THE LONGITUDINAL SPACE BETWEEN MARKINGS SHOULD BE 30 FEET.

4. MARKINGS CONSIDERED APPROPRIATE FOR USE WHEN WARRANTED INCLUDE THE FOLLOWING:

   A. REGULATORY
      STOP
      RIGHT (LEFT) TURN ONLY
      25 MPH
      SYMBOL ARROWS
   B. WARNING
      STOP AHEAD
      SIGNAL AHEAD
      SCHOOL
      SCHOOL X-ING
      PED X-ING
      R X R (SEE RCPM DETAIL)
      OTHER WORDS OR SYMBOLS MAY BE NECESSARY UNDER CERTAIN CONDITIONS

5. UNCONTROLLED USE OF PAVEMENT MARKINGS CAN RESULT IN DRIVER CONFUSION. WORD AND SYMBOL MARKINGS SHOULD BE NO MORE THAN THREE LINES.

6. THE WORD "STOP" SHALL NOT BE USED ON THE PAVEMENT UNLESS ACCOMPANIED BY A STOP LINE AND STOP SIGN. THE WORD "STOP" SHALL NOT BE PLACED ON THE PAVEMENT IN ADVANCE TO A STOP LINE, UNLESS EVERY VEHICLE IS REQUIRED TO STOP AT ALL TIMES.

7. PAVEMENT MARKINGS SHOULD GENERALLY BE NO MORE THAN ONE LANE IN WIDTH, WITH SCHOOL MESSAGES BEING THE EXCEPTION. FOR DETAILS OF SCHOOL AND SCHOOL CROSSING PAVEMENT MARKINGS, REFER TO PART VII OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

8. SPACING BETWEEN LETTERS SHOULD BE APPROXIMATELY 4 INCHES. THE WIDTH OF LETTERS MAY VARY DEPENDING ON THE WIDTH OF THE TRAVEL LANES.

9. LANE-USE ARROW MARKINGS MAY BE USED TO CONVEY EITHER GUIDANCE OR MANDATORY MESSAGES. ARROWS USED TO CONVEY A MANDATORY MOVEMENT MUST BE ACCOMPANIED BY STANDARD SIGNS AND THE PAVEMENT MARKING WORD "ONLY".

10. PAVEMENT MARKINGS ARE TO BE LOCATED AS SPECIFIED ELSEWHERE IN THE PLANS.

SEPTEMBER 2009

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

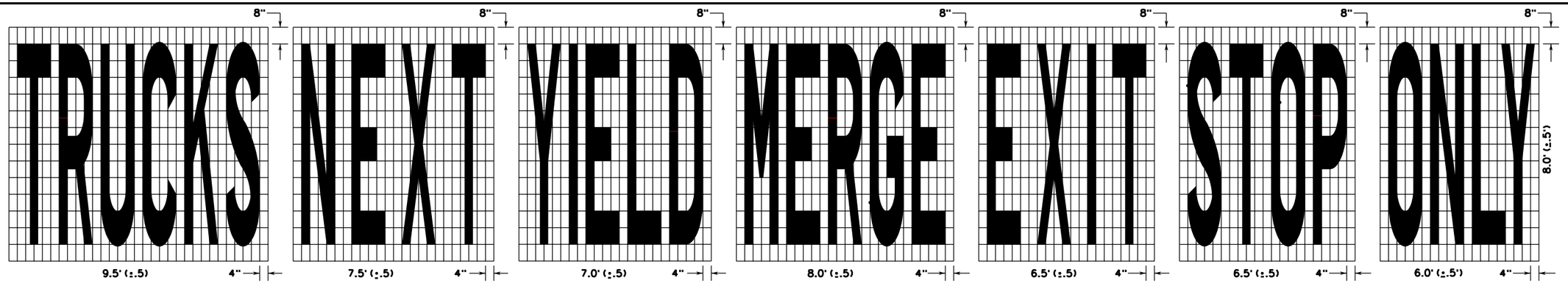
TRAFFIC ENGINEERING STANDARDS

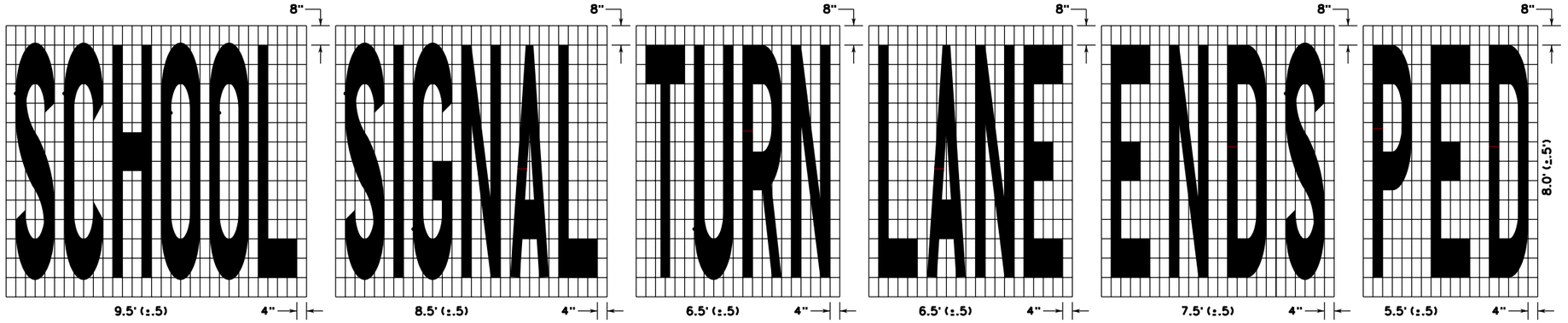
STANDARD PAVEMENT MARKINGS (ARROWS)

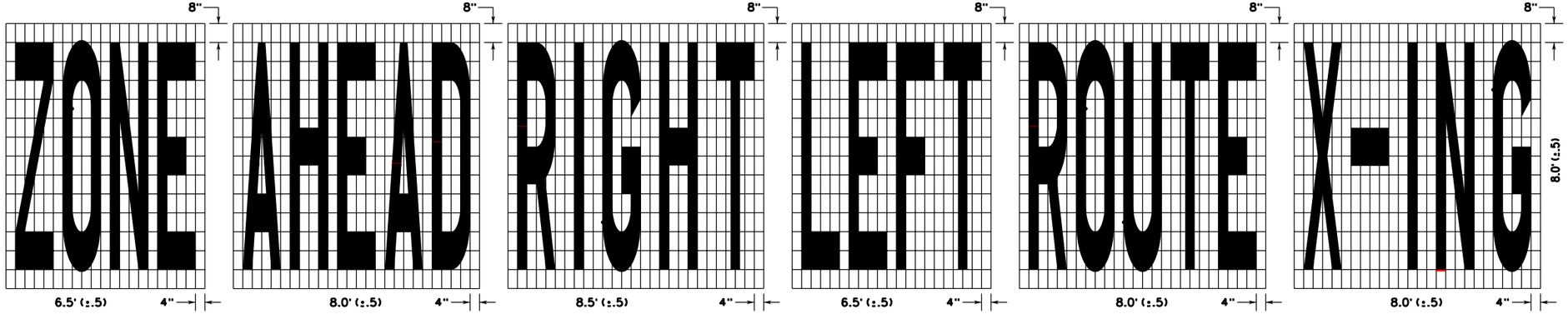
SHEET 3 OF 16

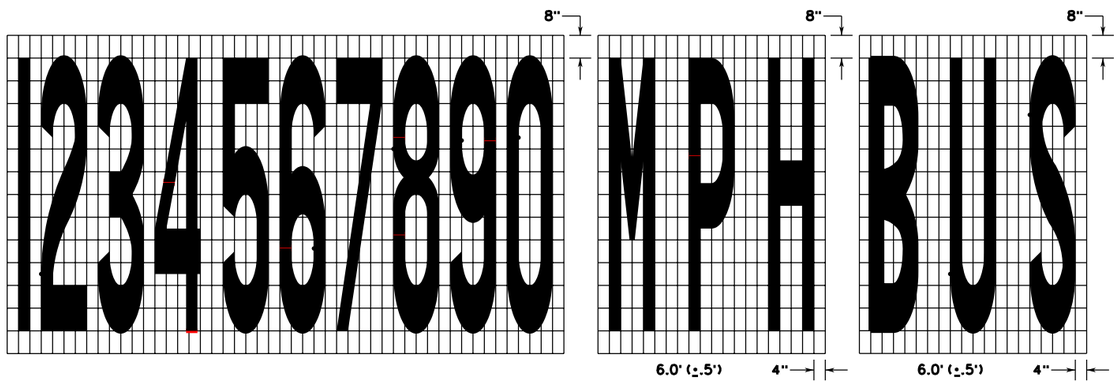
C13.1

% SUBMITTAL	PROJECT NO.:		DATE:
DRWN. BY: LAN	DSGN. BY: C.B.V.	CHKD. BY: M.E.	SHEET NO.: OF









SEPTEMBER 2009

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC ENGINEERING STANDARDS

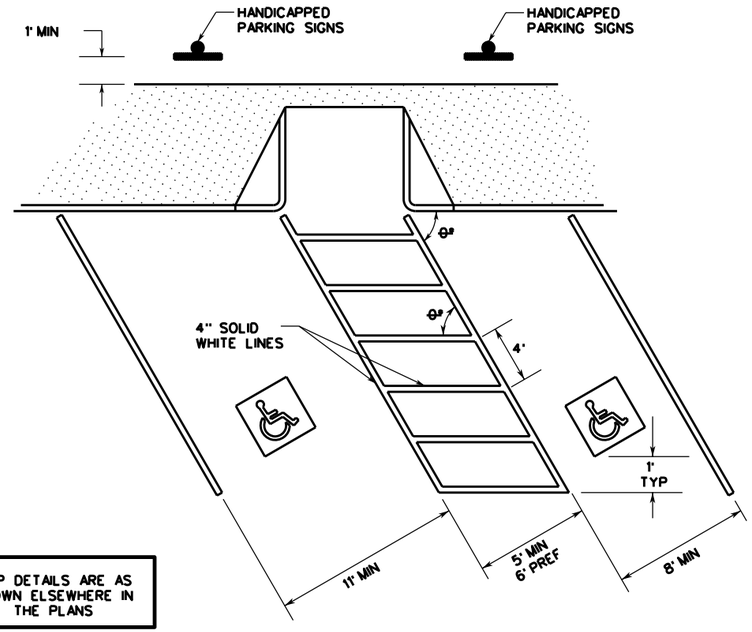
STANDARD PAVEMENT MARKINGS (WORDS)

SHEET 2 OF 16

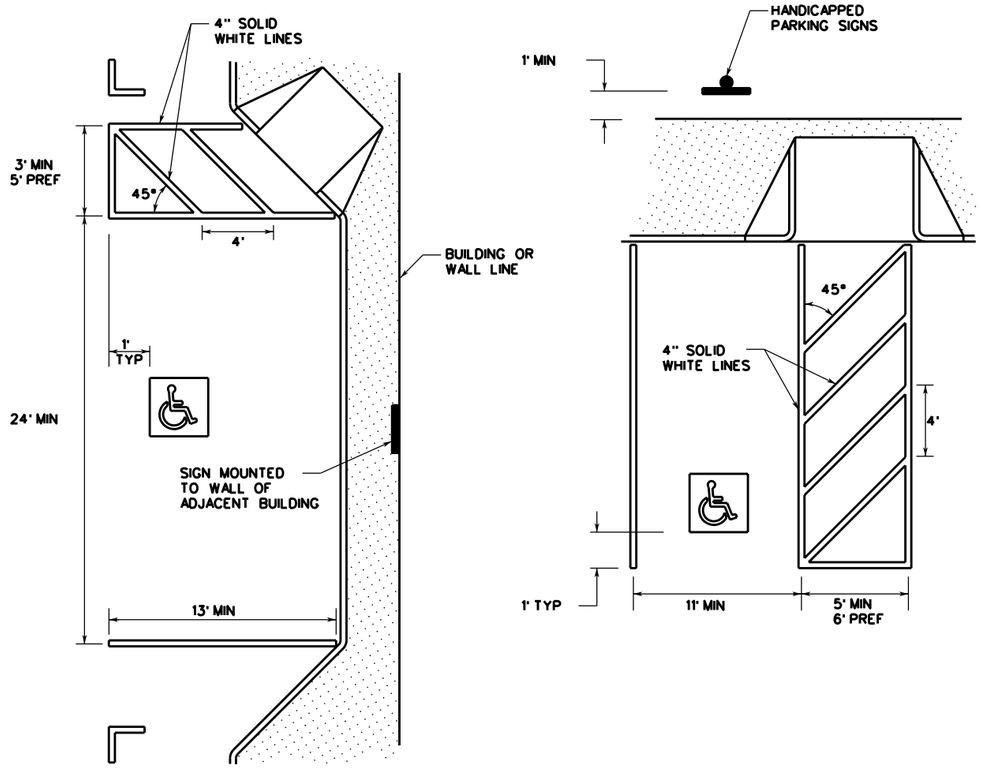
C13.2

% SUBMITTAL	PROJECT NO.:		DATE:
DRWN. BY: LAN	DSGN. BY: C.B.V.	CHKD. BY: M.E.	SHEET NO.: OF

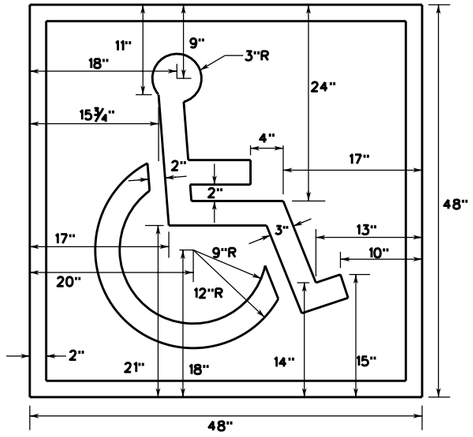
TYPICAL ACCESSIBLE PARKING SPACE DIMENSIONS



RAMP DETAILS ARE AS SHOWN ELSEWHERE IN THE PLANS

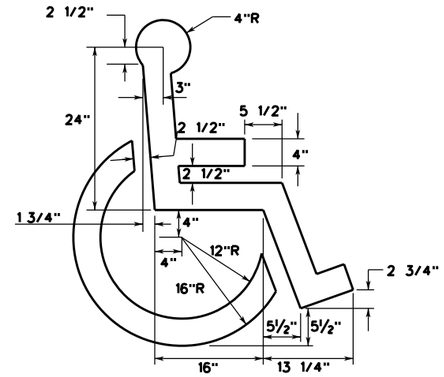


PAVEMENT MARKINGS



WITH BACKGROUND

SYMBOL & BORDER: WHITE
BACKGROUND: BLUE



SYMBOL ONLY

SYMBOL: BLUE OR WHITE

NOTES:

1. ALL PARKING SPACE LIMIT LINES SHALL BE 4" SOLID WHITE LINES.
2. AISLE MARKINGS SHOWN ARE EXAMPLES ONLY. OTHER METHODS TO INDICATE A NO PARKING AREA ARE ACCEPTABLE. AISLE MARKINGS SHALL BE WHITE.
3. DIMENSIONS OF LIMIT LINES, AISLE MARKINGS, AND SYMBOL (WITH OR WITHOUT BACKGROUND) MAY VARY ± 10%.
4. PAVEMENT MARKING SYMBOLS (WITH BACKGROUND):
   A) ARE REQUIRED UNLESS STATED ELSEWHERE IN THE PLANS,
   B) SHOULD BE PLACED TOWARD THE FAR END OF THE PARKING SPACES SO AS TO BE VISIBLE TO MOTORISTS IN THE TRAVEL LANE,
   C) MAY BE PAINTED OR PREFABRICATED MATERIAL, AND
   D) SHALL BE 30"x30" MINIMUM.
5. WITH APPROVAL OF THE CITY TRAFFIC ENGINEER, PREFABRICATED PAVEMENT MARKING SYMBOLS WITH BACKGROUND OF OTHER DIMENSIONS EXCEEDING THE 30"x30" MINIMUM MAY BE USED. ALTERNATIVE DESIGNS SHALL INCLUDE A PROPORTION SIZED SYMBOL OF ACCESSIBILITY, AND SHALL CONFORM TO THE ILLUSTRATED COLORS FOR BACKGROUND, SYMBOL AND BORDER.
6. ALL SLOPE IN AND AROUND EXPECTED WHEEL CHAIR PATH SHALL NOT EXCEED 2% X-SLOPES.

SEPTEMBER 2009

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC ENGINEERING STANDARDS

PAVEMENT MARKINGS FOR ACCESSIBLE PARKING

SHEET 6 OF 16

C13.3

% SUBMITTAL	PROJECT NO.:		DATE:
DRWN. BY: LAN	DSGN. BY: C.B.V.	CHKD. BY: M.E.	SHEET NO.: OF

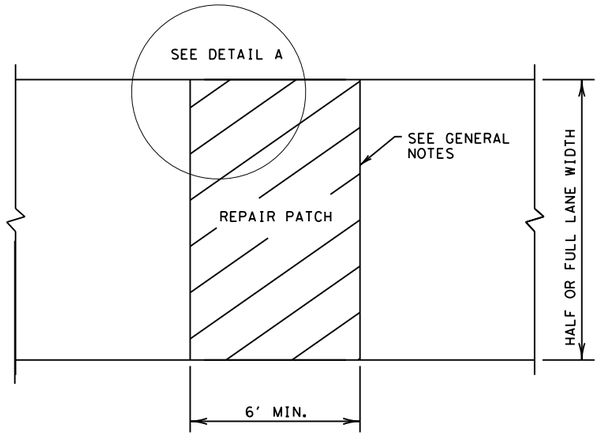
DATE:
FILE:

TABLE NO. 1 STEEL BAR SIZE AND SPACING						
TYPE PAVEMENT	SLAB THICKNESS AND BAR SIZE		LONGITUDINAL*		TRANSVERSE*	
			REGULAR BARS	TIEBARS	BARS	TIEBARS
	T (IN.)	BAR SIZE	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)
CRCP	6.0	#5	7.5	7.5	24	24
	6.5		7.0	7.0		
	7.0		6.5	6.5		
	7.5		6.0	6.0		
	8.0	#6	9.0	9.0	24	24
	8.5		8.5	8.5		
	9.0		8.0	8.0		
	9.5		7.5	7.5		
	10.0		7.0	7.0		
	10.5		6.75	6.75		
	11.0		6.5	6.5		
	11.5		6.25	6.25		
	≥12.0		6.0	6.0		
JRCP	<8.0	#5	24.0	12.0	24	24
	≥8.0	#6	24.0	12.0	24	24
CPCD	<8.0	#5	NONE	12.0	NONE	24
	≥8.0	#6	NONE	12.0	NONE	24

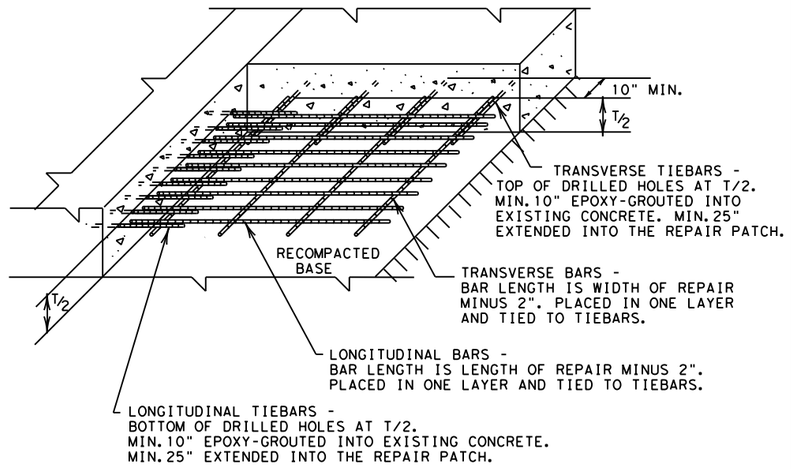
* USE 12" SPACING AS FIRST AND LAST SPACING AT END OR SIDE FOR ALL BARS.

GENERAL NOTES

1. ITEM 361, "REPAIR OF CONCRETE PAVEMENT" SHALL GOVERN FOR THIS WORK.
2. MULTIPLE PIECE TIEBARS SHALL BE USED WHEN THE REPAIR AREA MUST BE PLACED IN TWO STAGES DUE TO SEQUENCE OF CONSTRUCTION.
3. FULL DEPTH SAW CUTS SHALL BE MADE AROUND THE PERIMETER OF THE AREA TO BE REPAIRED. THE CUT SHALL BE MADE AT A RIGHT ANGLE TO THE PAVEMENT EDGE AND TO THE CENTER LINE OF THE PAVEMENT.
4. AT LEAST ONE LONGITUDINAL FULL DEPTH SAW CUT SHALL BE AT AN EXISTING LONGITUDINAL JOINT.
5. ADDITIONAL SAW CUTS MAY BE REQUIRED WITHIN THE AREA OF THE REPAIR TO FACILITATE REMOVAL OF THE CONCRETE OR TO ALLEVIATE BINDING OF THE FULL DEPTH SAW CUT AT THE REPAIR EDGE.
6. THE SAW CUTS WHICH EXTEND OUTSIDE THE AREA OF THE REPAIR WILL BE CLEANED AND FILLED WITH A CEMENTITIOUS GROUT APPROVED BY THE ENGINEER.
7. EXISTING LONGITUDINAL AND TRANSVERSE JOINTS REMOVED DUE TO REPAIR OPERATION SHOULD BE RESTORED IN ACCORDANCE WITH STANDARD SHEET "CONCRETE PAVING DETAILS, JOINT SEALS."



PLAN VIEW

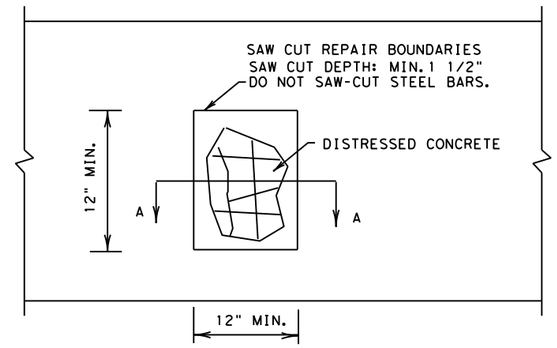


DETAIL A
GROUTED TIEBARS & REINFORCEMENT

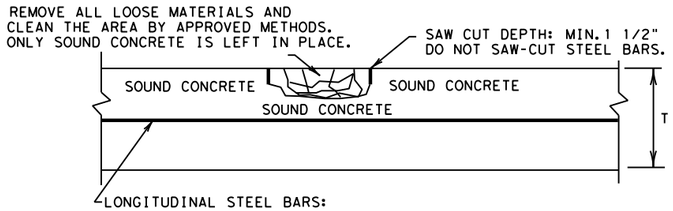
FULL-DEPTH REPAIR OF CRCP, JRCP, AND CPCD

GENERAL NOTES

1. ITEM 361, "REPAIR OF CONCRETE PAVEMENT" SHALL GOVERN FOR THIS WORK.
2. THE SAW CUTS WHICH EXTEND OUTSIDE THE AREA OF THE REPAIR WILL BE CLEANED AND FILLED WITH A CEMENTITIOUS GROUT APPROVED BY THE ENGINEER.
3. EXISTING LONGITUDINAL AND TRANSVERSE JOINTS REMOVED DUE TO REPAIR OPERATION SHOULD BE RESTORED IN ACCORDANCE WITH STANDARD SHEET "CONCRETE PAVING DETAILS, JOINT SEALS."



PLAN VIEW



LONGITUDINAL STEEL BARS:

*REPAIR AREAS MAY BE ADJUSTED AFTER REMOVING DISTRESSED CONCRETE. SWITCH THE HALF-DEPTH REPAIR TO FULL-DEPTH REPAIR IF EXPOSED EXISTING LONGITUDINAL BARS ARE DEFICIENT, AS APPROVED. COMPENSATION WILL BE MADE FOR UNEXPECTED VOLUMES OF REPAIR AREAS OR CHANGES IN SCOPE OF WORK.

*INCREASE THE REPAIR AREA AND PERFORM A FULL-DEPTH REPAIR AS DIRECTED IF LONGITUDINAL STEEL BARS WERE DAMAGED BY THE REMOVAL OPERATIONS. NO ADDITIONAL COMPENSATION WILL BE MADE.

SECTION A-A

HALF-DEPTH REPAIR

ADDENDUM No. 1 - 8/22/25

SHEET 1 OF 2

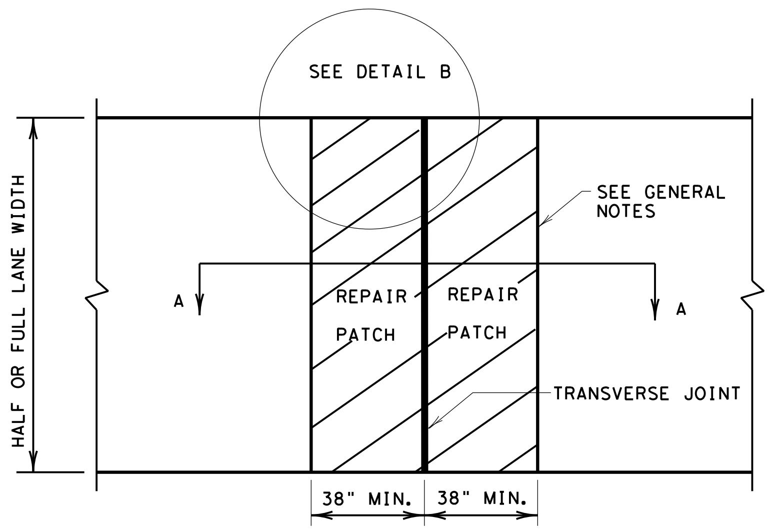
Texas Department of Transportation

Design Division Standard

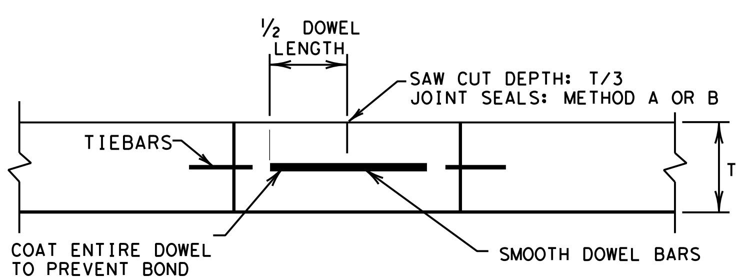
REPAIR OF CONCRETE PAVEMENT

REPCP-14

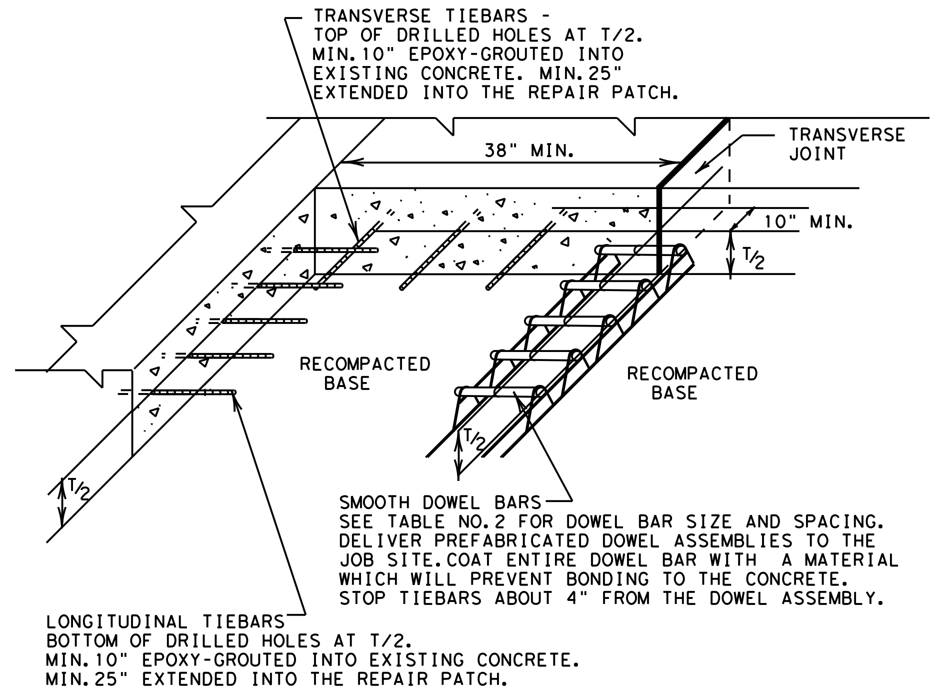
FILE: repcp14.dgn	DN: TxDOT	DN: HC	DW: HC	CK: AN
© TxDOT: DECEMBER 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.
				C13.4



PLAN VIEW



SECTION A-A


TRANSVERSE TIEBARS -
TOP OF DRILLED HOLES AT T/2.
MIN. 10" EPOXY-GROUTED INTO
EXISTING CONCRETE. MIN. 25"
EXTENDED INTO THE REPAIR PATCH.
38" MIN.
TRANSVERSE JOINT
10" MIN.
T/2
RECOMPACTED BASE
RECOMPACTED BASE
T/2
T/2
SMOOTH DOWEL BARS
SEE TABLE NO. 2 FOR DOWEL BAR SIZE AND SPACING.
DELIVER PREFABRICATED DOWEL ASSEMBLIES TO THE
JOB SITE. COAT ENTIRE DOWEL BAR WITH A MATERIAL
WHICH WILL PREVENT BONDING TO THE CONCRETE.
STOP TIEBARS ABOUT 4" FROM THE DOWEL ASSEMBLY.
LONGITUDINAL TIEBARS
BOTTOM OF DRILLED HOLES AT T/2.
MIN. 10" EPOXY-GROUTED INTO EXISTING CONCRETE.
MIN. 25" EXTENDED INTO THE REPAIR PATCH.

DETAIL B
GROUTED TIEBARS & DOWELS

GENERAL NOTES

1. ITEM 361, "REPAIR OF CONCRETE PAVEMENT" SHALL GOVERN FOR THIS WORK.
2. MULTIPLE PIECE TIEBARS SHALL BE USED WHEN THE REPAIR AREA MUST BE PLACED IN TWO STAGES DUE TO SEQUENCE OF CONSTRUCTION.
3. FULL DEPTH SAW CUTS SHALL BE MADE AROUND THE PERIMETER OF THE AREA TO BE REPAIRED. THE CUT SHALL BE MADE AT A RIGHT ANGLE TO THE PAVEMENT EDGE AND TO THE CENTER LINE OF THE PAVEMENT.
4. AT LEAST ONE LONGITUDINAL FULL DEPTH SAW CUT SHALL BE AT AN EXISTING LONGITUDINAL JOINT.
5. ADDITIONAL SAW CUTS MAY BE REQUIRED WITHIN THE AREA OF THE REPAIR TO FACILITATE REMOVAL OF THE CONCRETE OR TO ALLEVIATE BINDING OF THE FULL DEPTH SAW CUT AT THE REPAIR EDGE.
6. THE SAW CUTS WHICH EXTEND OUTSIDE THE AREA OF THE REPAIR WILL BE CLEANED AND FILLED WITH A CEMENTITIOUS GROUT APPROVED BY THE ENGINEER.
7. EXISTING LONGITUDINAL AND TRANSVERSE JOINTS REMOVED DUE TO REPAIR OPERATION SHOULD BE RESTORED IN ACCORDANCE WITH STANDARD SHEET "CONCRETE PAVING DETAILS, JOINT SEALS."
8. DOWEL BAR PLACEMENT TOLERANCE SHALL BE +/- 1/4 IN. HORIZONTALLY AND VERTICALLY UNLESS OTHERWISE SPECIFIED. WHERE DOWEL BAR BASKETS ARE USED, REMOVE THE SHIPPING WIRES.

TABLE NO. 2 DOWELS (SMOOTH BARS)

PAVEMENT THICKNESS (INCHES)	SIZE AND DIA.	LENGTH (IN.)	SPACING (IN.)
<10	#8 (1 IN.)	18.0	12.0
≥ 10	#10 (1 1/4 IN.)		

REPAIR OF TRANSVERSE JOINT OF CPCD

SHEET 2 OF 2

Texas Department of Transportation | Design Division Standard

REPAIR OF CONCRETE PAVEMENT

REPCP-14

FILE: repcp14.dgn	DN: TxDOT	DN: HC	DW: HC	CK: AN
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REVISIONS	DIST	COUNTY		SHEET NO.
				C13.5

ADDENDUM No. 1 - 8/22/25

DATE:
FILE:

DATE:
FILE:

DELINEATOR AND OBJECT MARKER APPLICATION AND SPACING

CONDITION	REQUIRED TREATMENT	MINIMUM SPACING
Fwy./Exp. Tangent	RPMs	See PM and FPM standard sheets
Fwy./Exp. Curve	Single delineators on right side	See delineator spacing table
Fwy/Exp.Ramp	Single delineators on at least one side of ramp (should be on outside of curves) (see Detail 4a on D&OM(4))	100 feet on ramp tangents Use delineator spacing table for ramp curves ("straightway spacing" does not apply to ramp curves)
Acceleration/ Deceleration Lane	Double delineators (see Detail 4a on D&OM(4))	100 feet (See Detail 4a on D & OM(4))
Truck Escape Ramp	Single red delineators on both sides	50 feet
Bridge Rail (steel or concrete) and Metal Beam Guard Fence	Bi-Directional Delineators when undivided with one lane each direction Single Delineators when multiple lanes each direction	Equal spacing (100'max) but not less than 3 delineators
Concrete Traffic Barrier (CTB) or Steel Traffic Barrier	Barrier reflectors matching the color of the edge line	Equal spacing 100' max
Cable Barrier	Reflectors matching the color of the edge line Bi-Directional Delineators when within clearzone	Every 5th cable barrier post (up to 100'max)
Cable Barrier Terminus / Impact Head	Object marker on end	Requires reflective sheeting provided by manufacturer per D & OM (VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end See D & OM(6)
Guard Rail Terminus / Impact Head	Divided highway - Object marker on approach end Undivided 2-lane highways - Object marker on approach and departure end	Requires reflective sheeting provided by manufacturer per D & OM (VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end See D & OM(5) and D & OM(6)
Bridges with no Approach Rail	Type 3 Object Marker (OM-3) at end of rail and 3 single delineators approaching rail	See D & OM(5)
Reduced Width Approaches to Bridge Rail	Type 2 and Type 3 Object Markers (OM-3) and 3 single delineators approaching bridge	Requires reflective sheeting provided by manufacturer per D & OM(VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end See D & OM(5)
Culverts without MBGF	Type 2 Object Markers	See Detail 2 on D & OM(4)
Crossovers	Double yellow delineators and RPMs	See Detail 1 on D & OM(4)
Pavement Narrowing (lane merge) on Freeways/Expressway	Single delineators adjacent to affected lane for full length of transition	100 feet

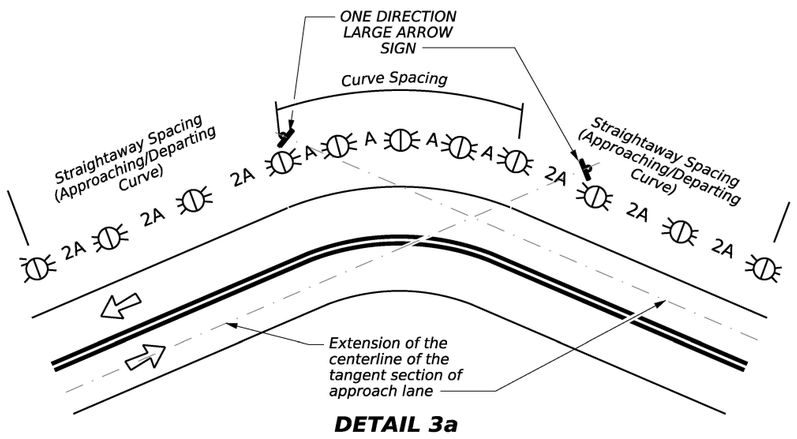
MINIMUM WARNING DEVICES AT CURVES WITH ADVISORY SPEEDS

Amount by which Advisory Speed is less than Posted Speed	Turn/Curve Advisory Speed: Turn (30 MPH or less)	Turn/Curve Advisory Speed: Curve (35 MPH or more)
5 MPH	• RPMs and Pavement Markings	
10 MPH	• Advance Horizontal Alignment Warning Sign with Advisory Speed Plaque; and • RPMs and Pavement Markings	
15 MPH	• Advance Horizontal Alignment Warning Sign with Advisory Speed Plaque; and • RPMs, Pavement Markings, and Delineators; or • RPMs, Pavement Markings, and One Direction Large Arrow sign(s)	• Advance Horizontal Alignment Warning Sign with Advisory Speed Plaque; and • RPMs, Pavement Markings, and Chevrons; or • RPMs, Pavement Markings, and One Direction Large Arrow sign(s) where geometric conditions or roadside obstacles prevent the installation of chevrons
20 MPH	• Advance Horizontal Alignment Warning Sign with Advisory Speed Plaque; and • RPMs, Pavement Markings, and Chevrons; or • RPMs, Pavement Markings, and One Direction Large Arrow sign(s) where geometric conditions or roadside obstacles prevent the installation of chevrons	
25 MPH or more	• Advance Horizontal Alignment Warning Sign with Advisory Speed Plaque; and • RPMs, Pavement Markings, and Chevrons; or • RPMs, Pavement Markings, and One Direction Large Arrow sign(s) where geometric conditions or roadside obstacles prevent the installation of chevrons	• Advance Horizontal Alignment Warning Sign with Advisory Speed Plaque; and • RPMs, Pavement Markings, and Chevrons

NOTE

A roadway is considered to have pavement markings when either a center line, edge lines, or both are present. A roadway is considered to have RPMs when they are used to supplement centerline pavement markings.

SUGGESTED SPACING FOR DELINEATORS ON HORIZONTAL CURVES



DETAIL 3a

NOTE

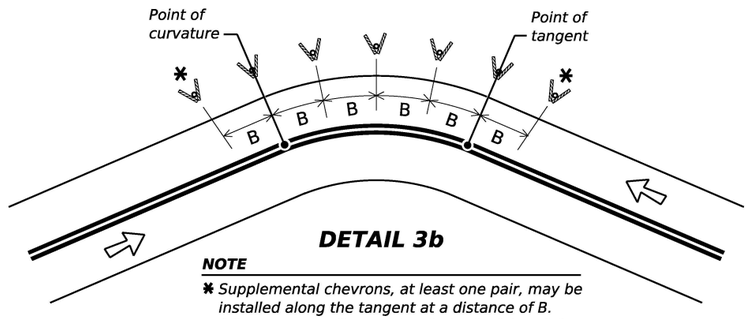
ONE DIRECTION LARGE ARROW (W1-6) sign should be located at approximately and perpendicular to the extension of the centerline of the tangent section of approach lane.

LEGEND	
	Delineator
	Bi-directional Delineator
	Sign

GENERAL NOTES

1. Unless otherwise indicated, the delineator or barrier reflector color shall conform to the color of the pavement edge line on the side of the road where the delineators or barrier reflectors are placed.
2. Barrier reflectors may be used to replace required delineators.
3. Single red delineators may be mounted on the back side of delineator posts for wrong way driver applications.

SUGGESTED SPACING FOR CHEVRONS ON HORIZONTAL CURVES



DETAIL 3b

NOTE

✱ Supplemental chevrons, at least one pair, may be installed along the tangent at a distance of B. Adverse curve aligment is a factor in determining if supplemental chevrons are needed.

DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS KNOWN

Degree of Curve	FEET: Radius of Curve	Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
		A	2A	B
1	5730	225	450	—
2	2865	160	320	—
3	1910	130	260	200
4	1433	110	220	160
5	1146	100	200	160
6	955	90	180	160
7	819	85	170	160
8	716	75	150	160
9	637	75	150	120
10	573	70	140	120
11	521	65	130	120
12	478	60	120	120
13	441	60	120	120
14	409	55	110	80
15	382	55	110	80
16	358	55	110	80
19	302	50	100	80
23	249	40	80	80
29	198	35	70	40
38	151	30	60	40
57	101	20	40	40

Curve delineator approach and departure spacing should include 3 delineators spaced at 2A. This spacing should be used during design preparation or when the degree of curve is known.

DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS NOT KNOWN

Advisory Speed (MPH)	FEET: Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
	A	2A	B
65	130	260	200
60	110	220	160
55	100	200	160
50	85	170	160
45	75	150	120
40	70	140	120
35	60	120	120
30	55	110	80
25	50	100	80
20	40	80	80
15	35	70	40

If the degree of curve is not known, delineator spacing may be determined based on the Advisory Speed of the curve. Use the delineator curve spacing for each Advisory Speed (MPH).

Texas Department of Transportation

Traffic Safety Division Standard

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS APPLICATION & SPACING D & OM(3)-25

FILE:	dom3-25.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS		DIST	COUNTY		SHEET NO.
8-04 7-20 3-15 5-25 8-15					

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