

MIDDLE CONCHO BOAT RAMP IMPROVEMENTS MIDDLE CONCHO PARK

**3399 MIDDLE CONCHO DRIVE
SAN ANGELO, TEXAS**

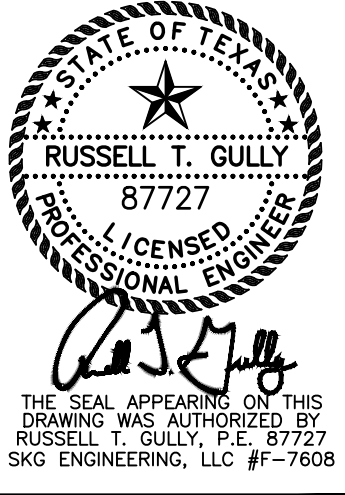


 **VICINITY MAP**
N.T.S.

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FIRM REGISTRATION NUMBER: F7608
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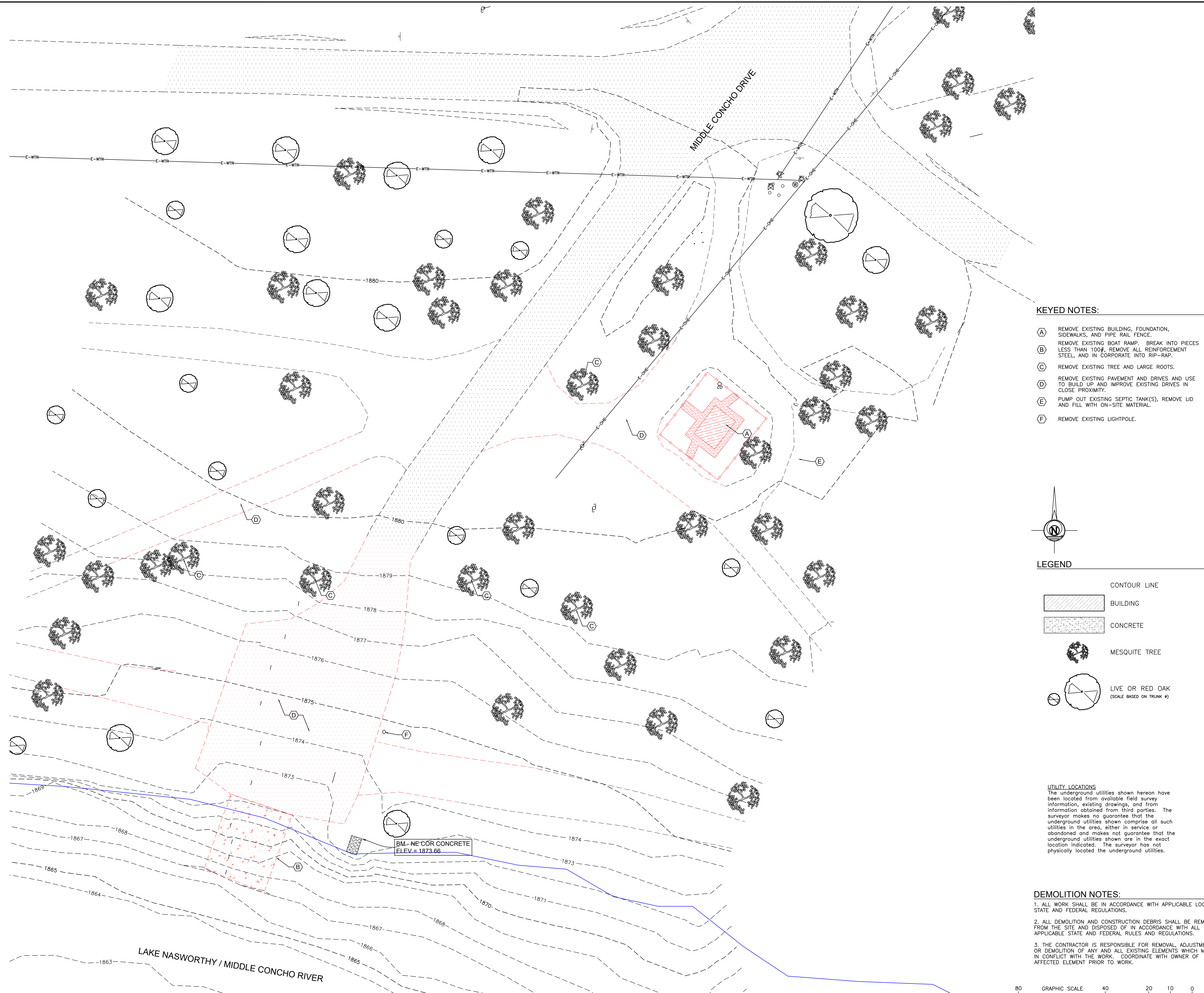


**MIDDLE CONCHO BOAT
RAMP IMPROVEMENTS
MIDDLE CONCHO PARK
SAN ANGELO, TEXAS**

COVER SHEET

REVISIONS	

DWG BY: RTG	DWG DATE: FEB. 6, 2020
JOB NO: 19-E-0890	SHEET NO: C0.0
SCALE: NONE	



- KEYED NOTES:**
- (A) REMOVE EXISTING BUILDING, FOUNDATION, SIDEWALKS, AND PIPE RAIL FENCE.
 - (B) REMOVE EXISTING BOAT RAMP. BREAK INTO PIECES LESS THAN 100#, REMOVE ALL REINFORCEMENT STEEL, AND IN CORPORATE INTO RIP-RAP.
 - (C) REMOVE EXISTING TREE AND LARGE ROOTS.
 - (D) REMOVE EXISTING PAVEMENT AND DRIVES AND USE TO BUILD UP AND IMPROVE EXISTING DRIVES IN CLOSE PROXIMITY.
 - (E) PUMP OUT EXISTING SEPTIC TANK(S), REMOVE LID AND FILL WITH ON-SITE MATERIAL.
 - (F) REMOVE EXISTING LIGHTPOLE.

LEGEND

- CONTOUR LINE
- BUILDING
- CONCRETE
- MESQUITE TREE
- LIVE OR RED OAK (SCALE BASED ON TRUNK Ø)

UTILITY LOCATIONS
 The underground utilities shown hereon have been located from available field survey information, existing drawings, and from information obtained from third parties. The surveyor makes no guarantee that the underground utilities shown are in the exact location indicated. The surveyor has not physically located the underground utilities.

- DEMOLITION NOTES:**
1. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
 2. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE STATE AND FEDERAL RULES AND REGULATIONS.
 3. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL, ADJUSTMENT, OR DEMOLITION OF ANY AND ALL EXISTING ELEMENTS WHICH MAY BE IN CONFLICT WITH THE WORK. COORDINATE WITH OWNER OF AFFECTED ELEMENT PRIOR TO WORK.



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 87727
 LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DRAWING WAS AUTHORIZED BY RUSSELL T. GULLY, P.E. #7727 SKG ENGINEERING, LLC #F-7608

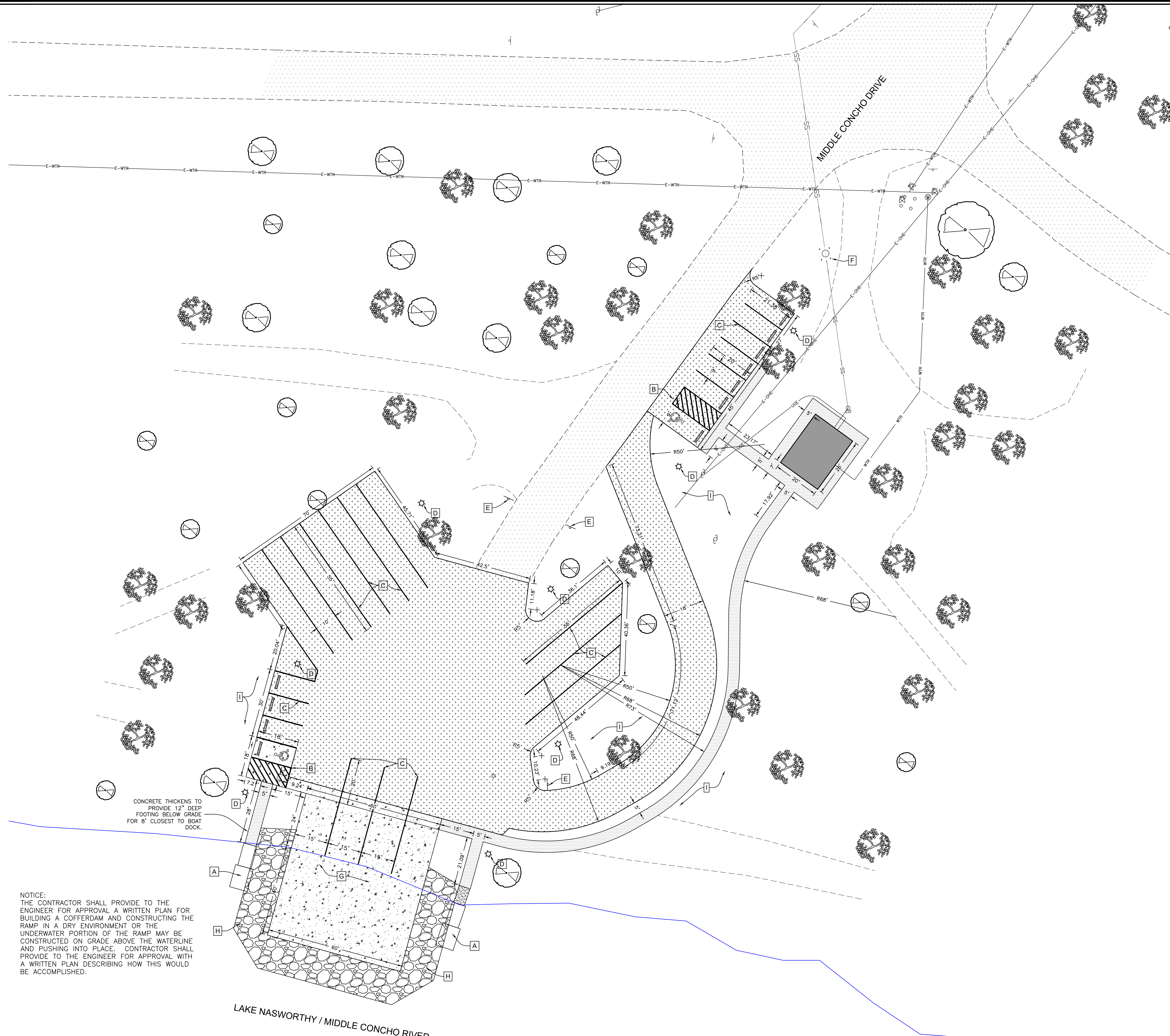


**MIDDLE CONCHO BOAT RAMP IMPROVEMENTS
 MIDDLE CONCHO PARK
 SAN ANGELO, TEXAS**

TOPOGRAPHIC SURVEY & DEMO PLAN

REVISIONS	

DWG BY: EG	DWG DATE: FEB. 6, 2020
JOB NO: 19-E-0890	SHEET NO: C0.1
SCALE: 1"=20'	



- KEYED NOTES:**
- A EXISTING BOAT DOCK ON EAST SIDE TO REMAIN. PROVIDE NEW BOAT DOCK ON WEST SIDE TO MATCH EAST SIDE DOCK.
 - B ACCESSIBLE PARKING SPACES, SIGNAGE, WHEEL STOP, AND ACCESS AISLE.
 - C 4" WIDE, REFLECTORIZED PAVEMENT MARKINGS, PARKING SPACE/DRIVE AISLE STRIPING.
 - D NEW LIGHT STANDARD AND ALL IN ONE SOLAR, LED LIGHT.
 - E ONE-WAY/ DO NOT ENTER SIGN.
 - F (4) PIPE BOLLARDS AROUND LIFTSTATION.
 - G NEW 60' WIDE, 4-LANE CONCRETE BOAT RAMP.
 - H 180 CU. YDS. OF STONE RIP-RAP, 20-200# NOMINAL SIZE APPROX. 18" THICK.
 - I GRADE AND RAKE SMOOTH DISTURBED VEGETATION AREAS OUTSIDE OF IMPROVEMENTS.

- LEGEND**
- EXISTING CONCRETE
 - EXISTING ASPHALT PAVEMENT
 - MESQUITE TREE
 - LIVE OR RED OAK (SCALE BASED ON TRUNK Ø)
 - NEW CONCRETE PAVEMENT
 - ASPHALT PAVEMENT
 - NEW CONCRETE SIDEWALK
 - NEW PRE-CAST CONCRETE BUILDING

- GENERAL NOTES:**
1. DIMENSIONS SHOWN HEREON ARE TO THE BACK OF CURB, CENTERLINE OF STRIPING, OR BUILDING FACE.
 2. EXISTING CONDITIONS, UTILITIES, SETBACKS AND EASEMENTS SHOWN HEREON ARE PROVIDED BASED ON A SURVEY PREPARED BY SKG ENGINEERING.
 3. EXISTING CONDITIONS, UTILITIES, SETBACKS AND EASEMENTS REPRESENT THE BEST INFORMATION AVAILABLE AND SHOULD NOT BE CONSTRUED AS EXACT AND COMPLETE AND ITS USE DOES NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY FOR LOSSES DUE TO ANY INACCURACIES. NOTIFY THE CIVIL ENGINEER OF ANY DISCREPANCIES FOUND.
 4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
 5. DO NOT SCALE DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS. CONTACT ENGINEER FOR VERIFICATION.
 6. COORDINATE WITH THE OTHER DRAWINGS AND SPECIFICATIONS TO VERIFY THE LOCATION OF ALL PROJECT REQUIREMENTS.
 7. ALL WORK PERFORMED SHALL CONFORM TO THE DRAWINGS, CITY'S STANDARD DETAILS AND SPECIFICATIONS AND THE US ARMY CORPS OF ENGINEERS GENERAL CONDITIONS TO THE REGIONAL GENERAL PERMIT CESWF-15-RGP-8. IF A CONFLICTS ARISES, THE MORE PROHIBITIVE SHALL TAKE PRECEDENCE AND BE CONSIDERED TO BE THE INTENT OF THE PROJECT DOCUMENTS.

CONCRETE THICKENS TO PROVIDE 12" DEEP FOOTING BELOW GRADE FOR 6" CLOSEST TO BOAT DOCK.

NOTICE:
THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER FOR APPROVAL A WRITTEN PLAN FOR BUILDING A COFFERDAM AND CONSTRUCTING THE RAMP IN A DRY ENVIRONMENT OR THE UNDERWATER PORTION OF THE RAMP MAY BE CONSTRUCTED ON GRADE ABOVE THE WATERLINE AND PUSHING INTO PLACE. CONTRACTOR SHALL PROVIDE TO THE ENGINEER FOR APPROVAL WITH A WRITTEN PLAN DESCRIBING HOW THIS WOULD BE ACCOMPLISHED.

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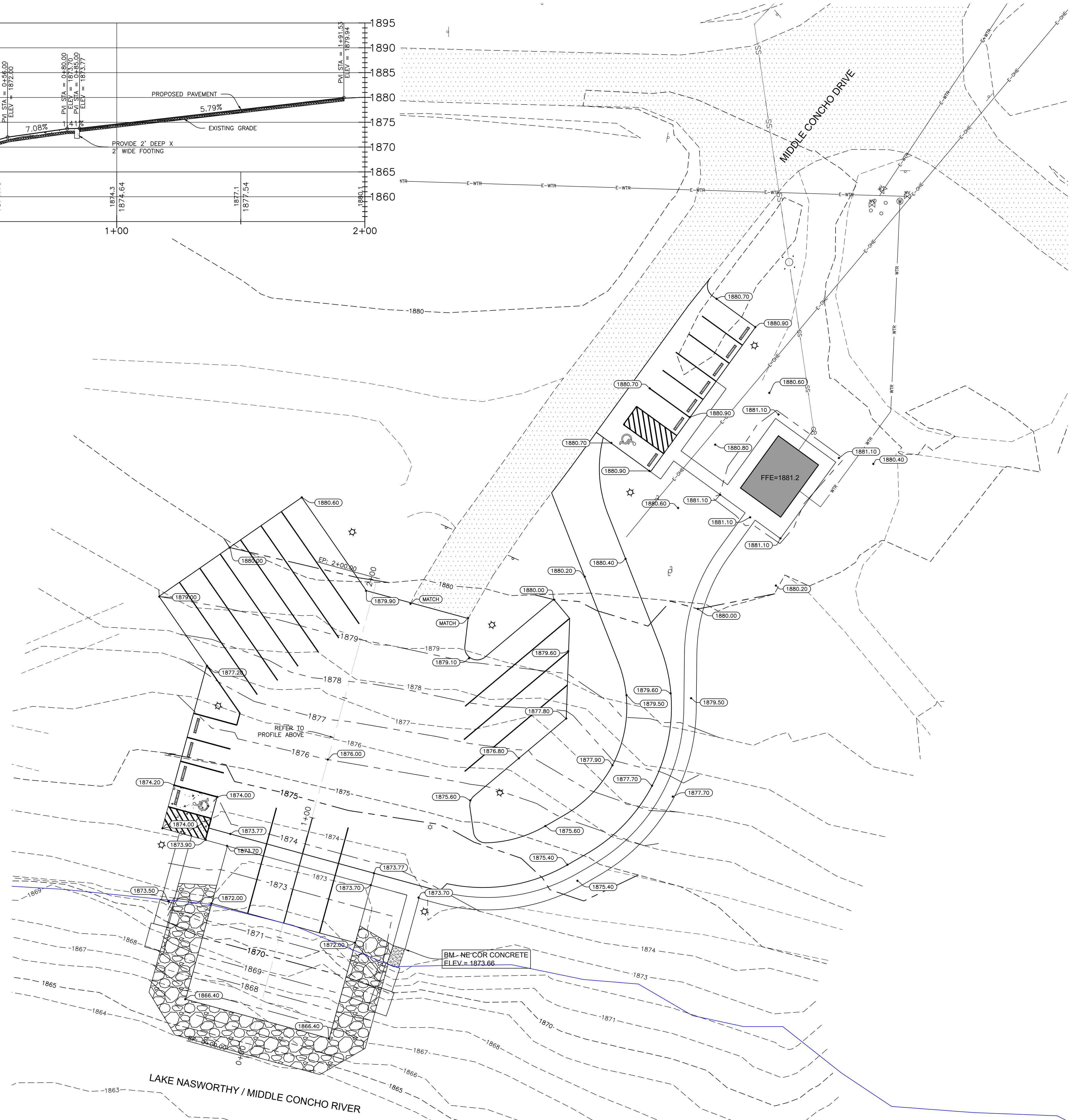
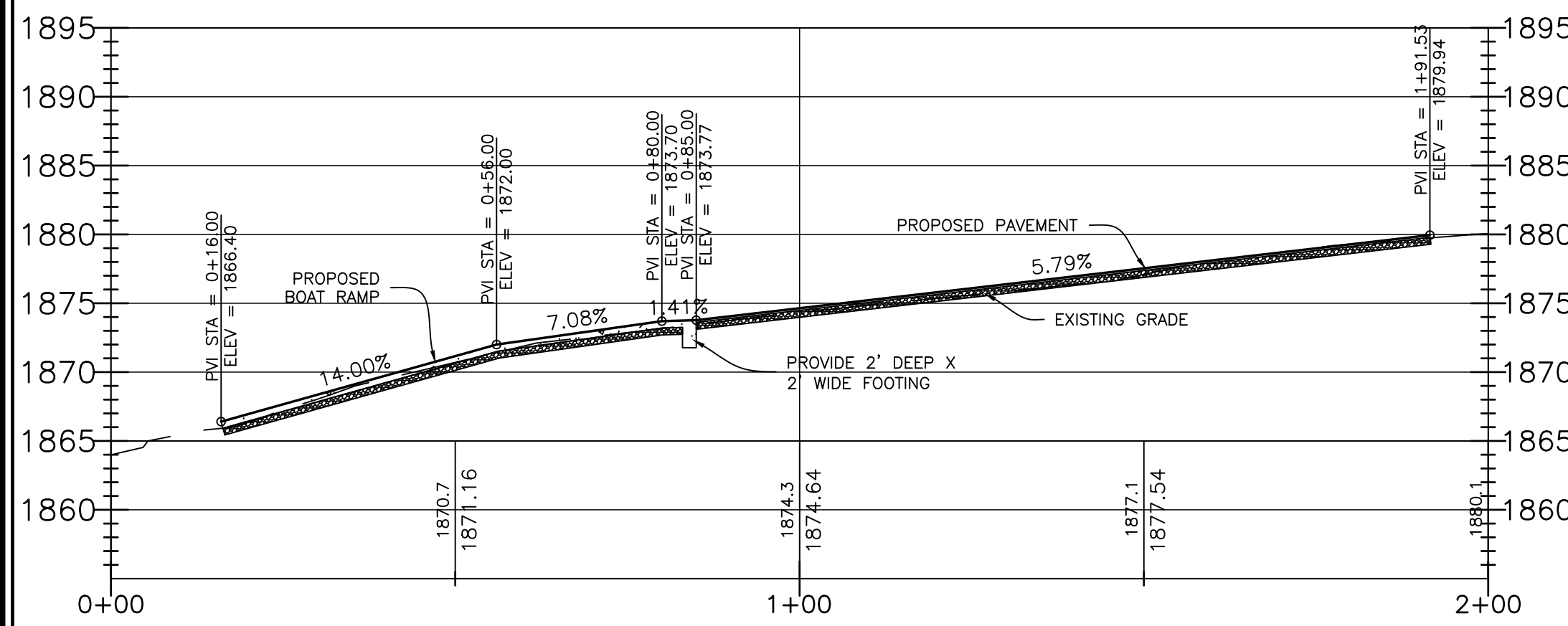
**MIDDLE CONCHO BOAT RAMP IMPROVEMENTS
MIDDLE CONCHO PARK
SAN ANGELO, TEXAS**

SITE PLAN

REVISIONS	

DWG BY: EG DWG. DATE: FEB. 6, 2020
JOB NO. 19-E-0880 SHEET NO. C1.1
SCALE: 1"=20'

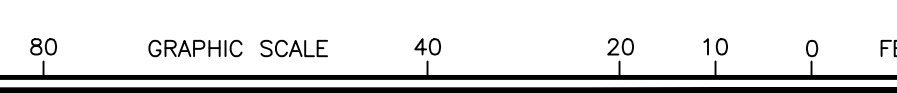




LEGEND

- 1880 EXISTING CONTOUR
- 1880 PROPOSED CONTOUR
- 1879.80 PROPOSED SPOT ELEVATION

- GRADING NOTES:**
1. CONTOURS SHOWN HEREON BASED ON A SURVEY BY SKG ENGINEERING.
 2. PROVIDE UNIFORM SLOPE BETWEEN SPOT ELEVATIONS AND CONTOURS EXCEPT AS REQUIRED IN 5 AND 6.
 3. SPOT ELEVATIONS AND GRADES SHOWN HEREON REPRESENT THE FINISHED SURFACE. SITE CONTRACTOR TO ACCOUNT FOR THICKNESS OF BASE, PAVEMENT, CONCRETE, OR OTHER MISC. SURFACES TO BE APPLIED TO REACH FINAL GRADE.
 4. CONTRACTOR TO FIELD VERIFY ALL ELEVATIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
 5. SLOPES IN HANDICAP SPACES AND ACCESS AISLES SHALL NOT EXCEED 1:50 (2%) IN ALL DIRECTIONS.
 6. ACCESSIBLE ROUTES WITH A SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP AND COMPLY WITH TAS. THE MAXIMUM CROSS SLOPE ALONG AN ACCESSIBLE ROUTE SHALL NOT EXCEED 2%.
 7. PROVIDE POSITIVE DRAINAGE AROUND AND/OR AWAY FROM ALL BUILDINGS IN ACCORDANCE WITH THE BUILDING CODE AND CITY ORDINANCES.
 8. THE FINISHED SURFACE OF THE CURB AND GUTTER AND PAVEMENT SHALL BE SMOOTH AND TRUE TO WITHIN 0.04 FEET OF THE ESTABLISHED LINE, GRADE, AND CROSS SECTION. AREAS THAT POND WATER GREATER THAN 1/4 INCH DEEP WILL NOT BE PERMITTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING DEFICIENT AREAS.
 9. ALL SITE WORK SHALL BE IN ACCORDANCE WITH, OR SURPASS RECOMMENDATIONS OF SOILS REPORT, DRAWINGS, AND SPECIFICATIONS. IF A CONFLICT ARISES, THE MORE PROHIBITIVE SHALL TAKE PRECEDENCE AND BE CONSIDERED TO BE THE INTENT OF THE PROJECT DOCUMENTS. IN ALL CASES, STRICTLY ADHERE TO DRAWINGS AND SPECIFICATIONS, UNLESS SOILS REPORT RECOMMENDATION EXCEEDS THE DRAWINGS AND SPECIFICATIONS.



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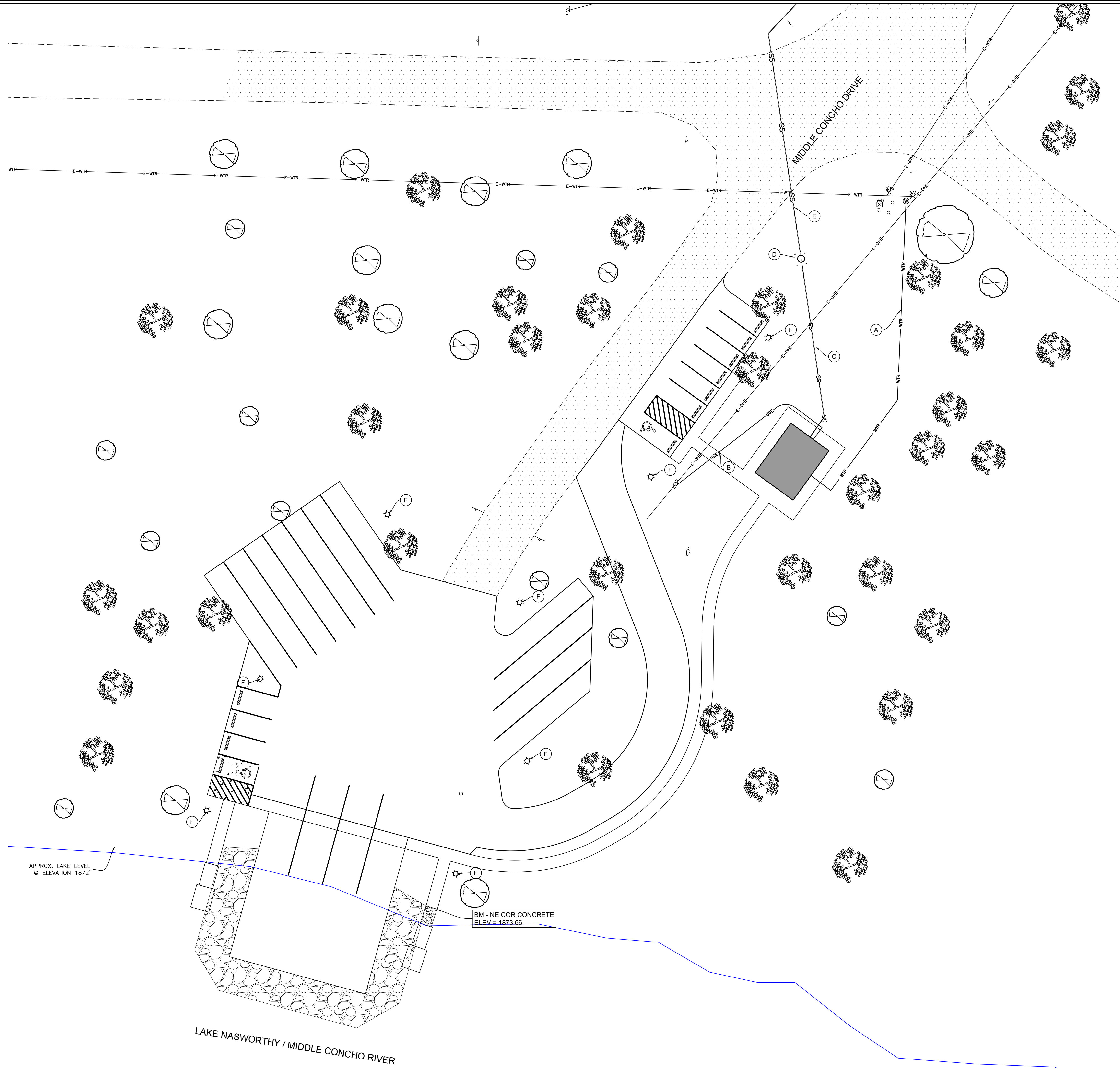


**MIDDLE CONCHO BOAT RAMP IMPROVEMENTS
 MIDDLE CONCHO PARK
 SAN ANGELO, TEXAS**

GRADING PLAN

REVISIONS

DWG. BY:	EG	DWG. DATE:	FEB. 6, 2020
JOB NO.:	19-E-0880	SHEET NO.:	C2.1
SCALE:	1"=20'		



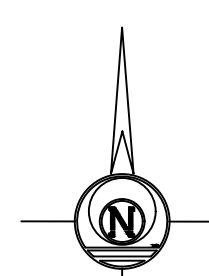
APPROX. LAKE LEVEL
● ELEVATION 1872'

BM - NE COR CONCRETE
ELEV = 1873.66

LAKE NASWORTHY / MIDDLE CONCHO RIVER

KEYED NOTES:

- (A) 1-1/2" PVC SCH40 WATER SERVICE LINE, 1" METER AND VALVE BOX. REFER TO PLUMBING PLANS OR CONNECTION REQUIREMENTS AT BUILDING.
- (B) PROVIDE ALL CONDUITS FROM SERVICE POLE TO BUILDING. REFER TO ELECTRICAL PLANS FOR CONNECTION REQUIREMENT TO BUILDING.
- (C) 4" PVC SEWER SERVICE LINE. REFER TO PLUMBING PLANS FOR CONNECTION REQUIREMENTS AT BUILDING.
- (D) SMITH PUMP LDGS DUPLEX PACKAGE WETWELL AND LIFTSTATION.
- (E) 2" PVC SEWER FORCEMAIN. REFER TO C3.2.
- (F) LIGHT POLE.



LEGEND

EXISTING		PROPOSED	
-WTR-	WATER LINE	-WTR-	WATER LINE
-SS-	SEWER LINE	-SS-	SEWER LINE
-ONE-	ELECTRIC	-ONE-	ELECTRIC

UTILITY NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF SAN ANGELO PUBLIC WORKS STANDARDS, APPLICABLE CODES, AND THE PROJECT SPECIFICATIONS. THE MORE STRINGENT STANDARD SHALL APPLY WHEN IN CONFLICT.
2. EXISTING LINE LOCATIONS ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE, BUT IS NOT GUARANTEED TO BE CORRECT OR COMPLETE.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT SIZE, TYPE, AND LOCATION OF ALL UTILITIES AND PROTECTING AND REPAIRING THE SAME AT NO ADDITIONAL COST TO THE OWNER.
4. COORDINATE WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND VERIFY THE LOCATION OF ALL PROJECT REQUIREMENTS.
5. PROVIDE WATER SERVICE FROM EXISTING MAIN TO BUILDING. CONTACT THE CITY OF SAN ANGELO WATER UTILITY DEPT. AT 325.657.4209 FOR CHARGES OR FEES FOR WATER SERVICE CONNECTION. METERS AND VALVE BOXES TO BE FLUSH WITH GRADE. ALL WORK SHALL MEET THE REQUIREMENTS OF AND SHALL BE INSPECTED BY THE CITY OF SAN ANGELO.
6. PROVIDE NEW SEWER SERVICE FROM EXISTING MAIN TO BUILDING. CONTACT THE CITY OF SAN ANGELO WATER UTILITY DEPT. AT 325.657.4209 FOR CHARGES OR FEES FOR SEWER SERVICE CONNECTION. ALL WORK SHALL MEET THE REQUIREMENTS OF AND SHALL BE INSPECTED BY THE CITY OF SAN ANGELO.
7. PROVIDE ELECTRICAL SERVICE TO BUILDING. VERIFY ELECTRICAL SERVICE REQUIREMENTS WITH AEP. CONTACT AEP FOR CHARGES, FEES, AND INSTALLATION REQUIREMENTS FOR ELECTRICAL SERVICE. CONTRACTOR IS RESPONSIBLE FOR MOUNTING METER BASE, METER, DITCHING, & ALL CONDUITS.

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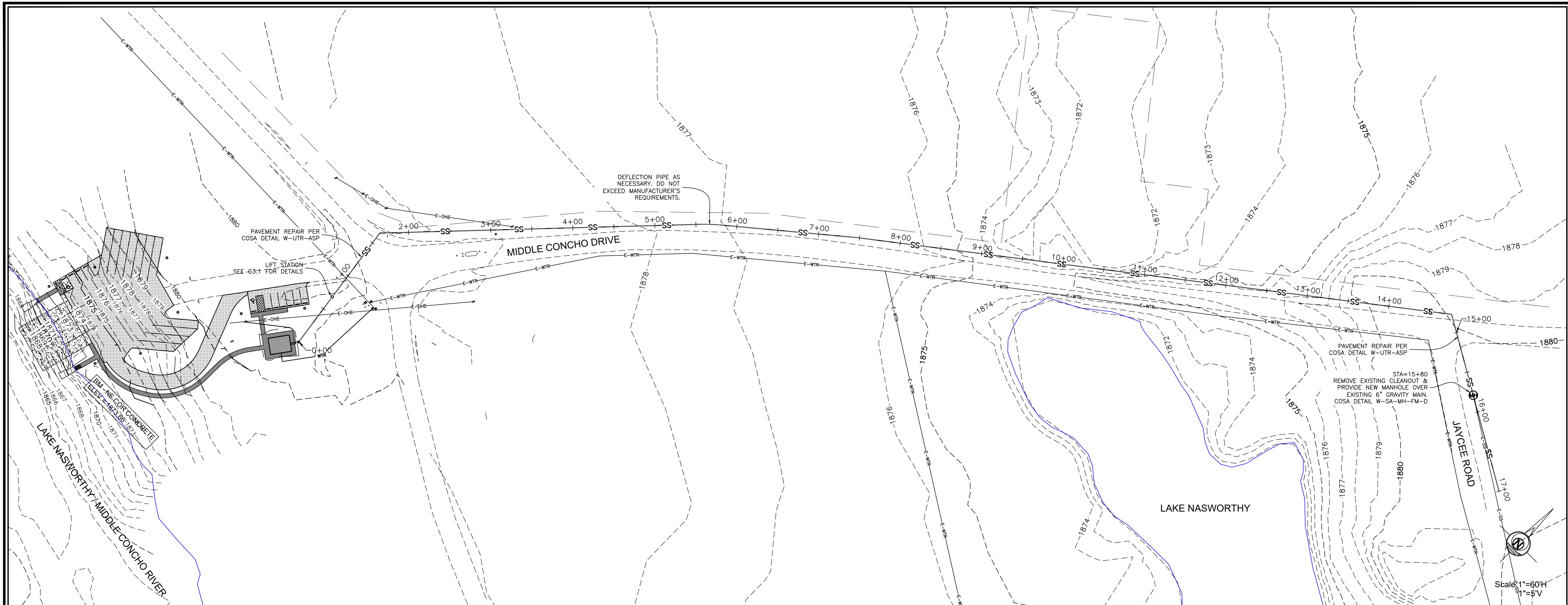


**MIDDLE CONCHO BOAT RAMP IMPROVEMENTS
MIDDLE CONCHO PARK
SAN ANGELO, TEXAS**

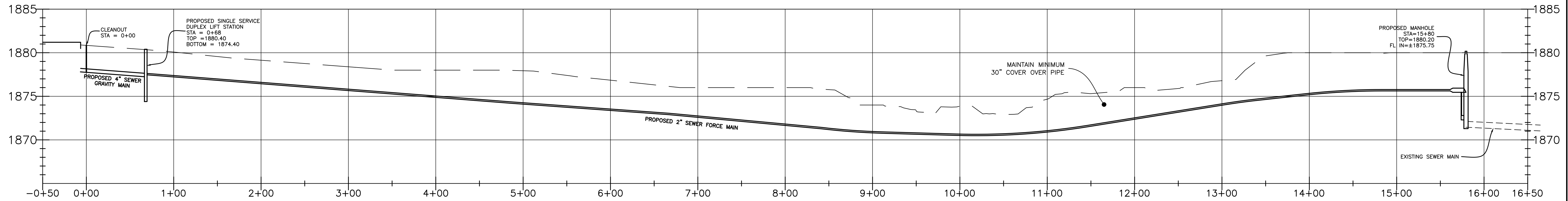
UTILITY PLAN

REVISIONS

DWG BY: RTG	DWG DATE: FEB. 6, 2020
JOB NO: 19-E-0880	SHEET NO: C3.1
SCALE: 1"=20'	



Sewer Force Main PROFILE



GENERAL NOTES:

- All work shall be performed in accordance with the City of San Angelo Water Utility's Standards.
- Municipal water lines are to be constructed in accordance with the 'Rules and Regulations for Public Water Systems', Section 290, as adopted by the TCEQ.
- Sanitary sewer lines are to be constructed in accordance with the Chapter 217, 'Design Criteria for Sewerage Facilities' as adopted by the TCEQ.
- Where water lines and new sewer lines are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC 217.53 (Design of Sewerage Systems) or 30 TAC 290.44(e) Water Hygiene).
- Existing line locations are shown for the convenience of the contractor in accordance with the best information available, but is not guaranteed to be correct or complete.
- The contractor is responsible for verifying the exact size, type, and location of all utilities and protecting and repairing the same at no additional cost to the owner.
- Prior to beginning work, the installer shall be responsible for ensuring that adequate horizontal and vertical controls are in place for locating the utility line.
- The contractor is responsible for adjusting the tops of all utility features to finished grade after the site work is complete.
- The contractor shall provide the engineer with a set of As-Built drawings showing the constructed flowline and top of manhole elevations and any deviations from the plans.
- For sewer services with less than 24" of cover, the contractor shall either video the line or run a mandrel through the line to verify integrity after the street subgrade is compacted and before the street is paved.
- The contractor shall notify the City of San Angelo Water Utilities Department prior to initiating any on-site water utilities related work.

CITY OF SAN ANGELO
DEPARTMENT OF PUBLIC WORKS

- ACCEPTED
- ACCEPTED AS NOTED

City of San Angelo Water Utilities Department
Contact Information:
Engineering Services Division:
(325) 657-4201

Drawing as to design only. Dimensions and location are not verified, contractor to verify as to plans and/or installation requirements.

DATE _____

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**MIDDLE CONCHO BOAT
RAMP IMPROVEMENTS
MIDDLE CONCHO PARK
SAN ANGELO, TEXAS**

SANITARY SEWER
PLAN/PROFILE

REVISIONS	

DWG. BY: EG	DWG. DATE: FEB. 6, 2020
JOB NO. 19-E-0890	SHEET NO. C3.2
SCALE: 1"=60'	S-

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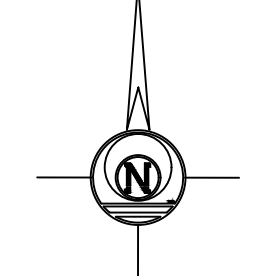
EROSION CONTROL WORKMAP

REVISIONS	

DWG BY: RTG DWG DATE: FEB. 6, 2020
 JOB NO: 19-E-0880 SHEET NO:
 SCALE: 1"=20' **C4.1**

KEYED CONTROL MEASURES
 ONE OR ALL OF THE FOLLOWING MAY OR MAY NOT BE SCHEDULED AS A CONTROL MEASURE ON THIS WORKMAP.

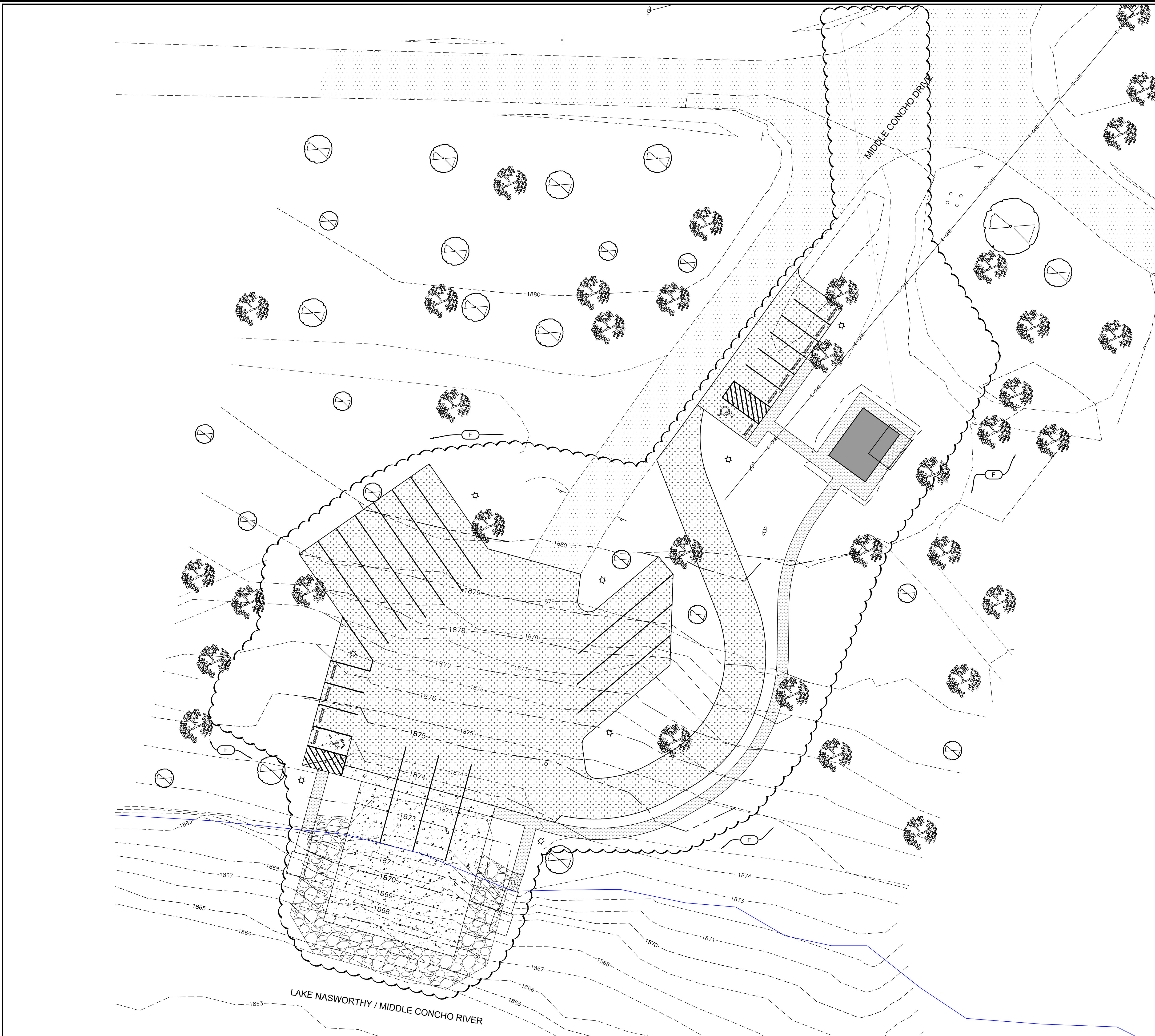
- (A) CONSTRUCTION EXIT
- (B) DISCHARGE POINT
- (C) SILT FENCE
- (D) DIVERSION DIKE
- (E) INTERCEPTOR SWALE
- (F) VEGETATION
- (G) MULCHING
- (H) EROSION CONTROL LOG
- (I) STRAW BALE DIKE
- (J) TRIANGULAR SEDIMENT FILTER DIKE
- (K) INLET PROTECTION
- (L) SEDIMENT BASIN

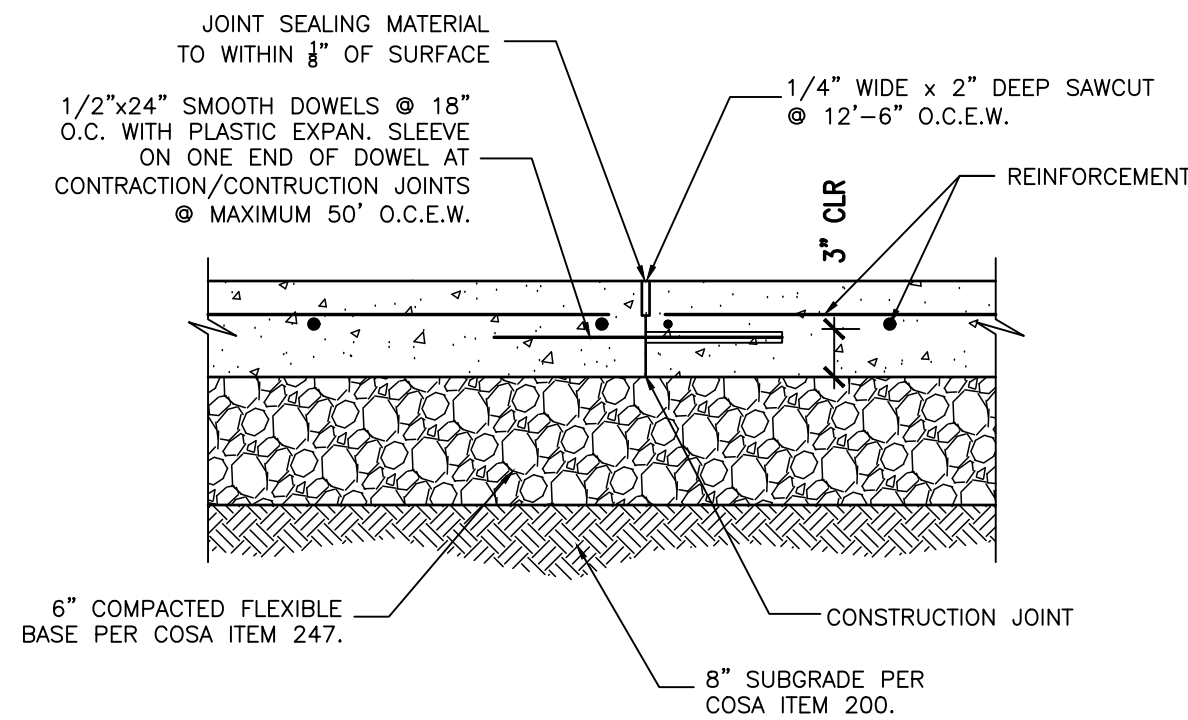


- LEGEND**
- PROPERTY LINE
 - - - - - EXISTING CONTOUR
 - - - - - PROPOSED CONTOUR
 - ~~~~~ LIMITS OF SOIL DISTURBANCE

GENERAL NOTES:

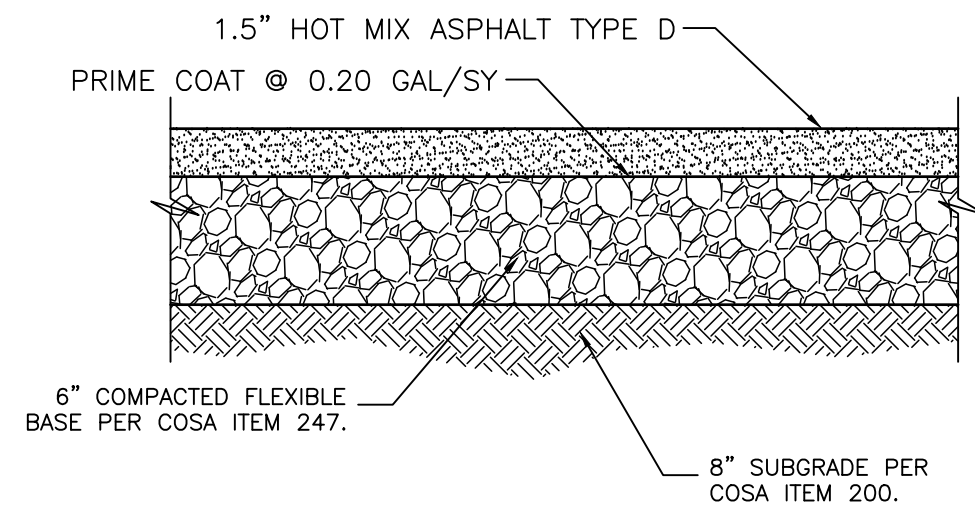
1. DRAINAGE PATTERNS AND APPROXIMATE SLOPES ARE SHOWN BY THE CONTOUR LINES.
2. LIMITS OF SOIL DISTURBING OPERATIONS ARE IDENTIFIED ON THIS SITE MAP. THE AREA OUTSIDE THE SOIL DISTURBING AREAS WILL REMAIN UNDISTURBED NATURAL VEGETATION OR OTHER STABILIZED SURFACES.
3. LOCATIONS OF MAJOR STRUCTURAL CONTROLS ARE IDENTIFIED ON THIS SITE MAP. NATURAL VEGETATION AND SILT FENCES WILL BE USED AS MAJOR STRUCTURAL CONTROLS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
4. STABILIZATION PRACTICES ARE TO OCCUR OVER ALL AREAS IDENTIFIED ON THIS SITE MAP OR DISTURBED BY CONSTRUCTION ACTIVITIES. REVEGETATION OR MULCHING WILL OCCUR IN AREAS OF SOIL DISTURBANCE NOT COVERED BY A STABILIZED SURFACE.
5. THE LOCATION OF THE STAGING AREA IS IDENTIFIED ON THIS SITE MAP. THIS WILL BE THE LOCATION OF OFF-SITE MATERIAL, WASTE, BORROW, FILL, OR EQUIPMENT STORAGE AREAS.
6. THE SURFACE WATER THAT IS ADJACENT IS LAKE NASWORTHY.
7. STORM WATER SHOULD NOT BE ALLOWED TO DISCHARGE DIRECTLY FROM THE SITE TO A SURFACE WATER BODY.
8. EXCLUSION OF A CONTROL MEASURE ON THIS DRAWING DOES NOT ABSOLVE THE CONTRACTOR OR OPERATOR OF HIS RESPONSIBILITY TO ADHERE WITH THE REQUIREMENTS OF THE STORMWATER POLLUTION PREVENTION PLAN. THIS DRAWING IS INTENDED TO BE REVISED AND AMENDED BY THE CONTRACTOR OR OPERATOR DURING THE CONSTRUCTION PROCESS TO ENSURE COMPLIANCE WITH THE TDES GENERAL PERMIT.
9. SHOW THE LOCATION AND DATE OF INSTALLATION ON ALL CONSTRUCTION ENTRANCES, EQUIPMENT STORAGE LOCATIONS, MATERIAL STORAGE LOCATIONS, VEHICLE WASHES, AND SANITARY FACILITIES.
10. MARK THOSE AREAS WHERE VEGETATION HAS BEEN STRIPPED OR WHERE SOIL HAS BEEN DISTURBED. DATE OF DISTURBANCE SHALL BE PLACED IN THESE AREAS.
11. MARK THOSE AREAS WHERE CONSTRUCTION HAS CEASED AND PERMANENT VEGETATION IS BEING ESTABLISHED.
12. DATE REMOVAL OF EROSION CONTROL DEVICES AND NOTE REASON FOR REMOVAL IN THE SWPPP.
13. PRIOR TO BEGINNING OPERATOR SHALL MAKE COPIES OF PLAN. IF CURRENT PLAN BECOMES TOO CROWDED FOR USE, OPERATOR SHALL PLACE "SEE REVISED PLAN" WITH DATE ON CURRENT PLAN, AND BEGIN TO USE A COPY FOR NEW PLAN.





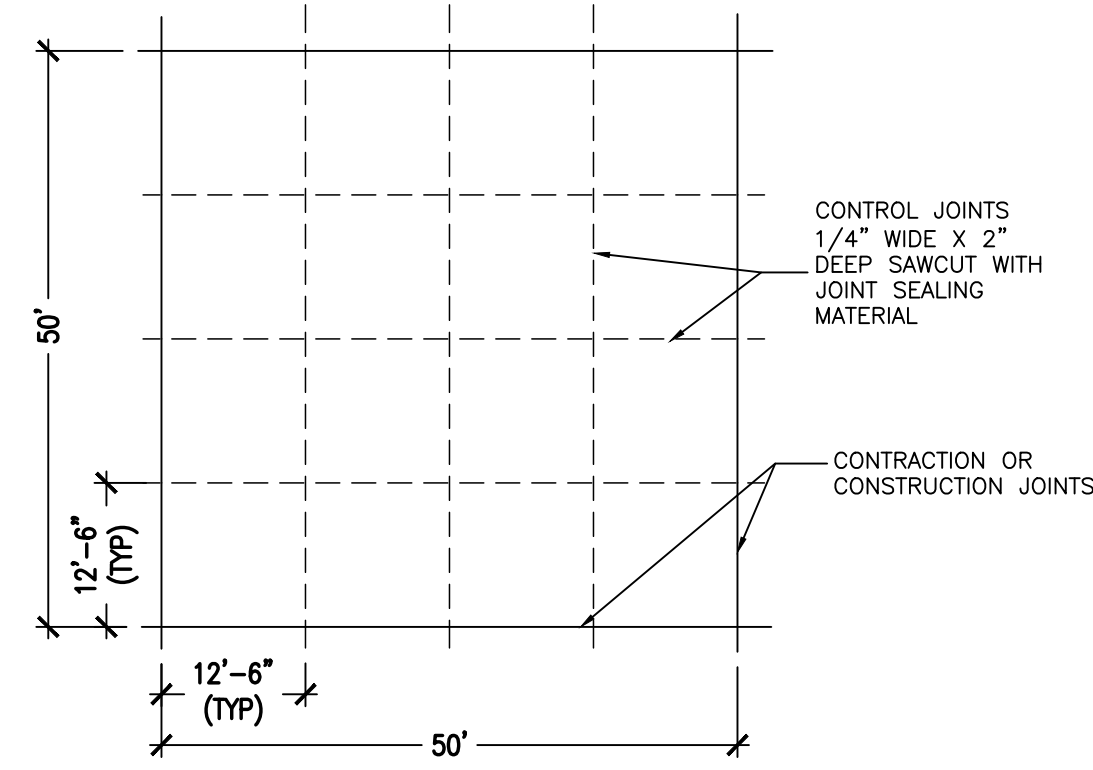
1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI, A SLUMP BETWEEN 4 TO 6 INCHES, AN AIR CONTENT BETWEEN 3% AND 6%, A ROUGH BROOM FINISH, AND SCORE OR CUT CONTROL JOINTS 2" DEEP AND FILL WITH JOINT SEALING COMPOUND @ MAX. 12'-6" O.C.E.W.
2. COMPACTED BASE—CRUSHED LIMESTONE PER TxDOT ITEM 247, TYPE A, GRADE 2 COMPACTED TO AT LEAST 97% STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT WITHIN ±3% POINTS OF THE OPTIMUM MOISTURE CONTENT.
3. COMPACTED SUBGRADE — SCARIFY, MOISTURE CONDITION, AND COMPACT THE TOP 6" TO AT LEAST 95% STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT WITHIN ±2% POINTS OF THE OPTIMUM MOISTURE CONTENT.

1 CONCRETE PAVEMENT SECTION
NO SCALE

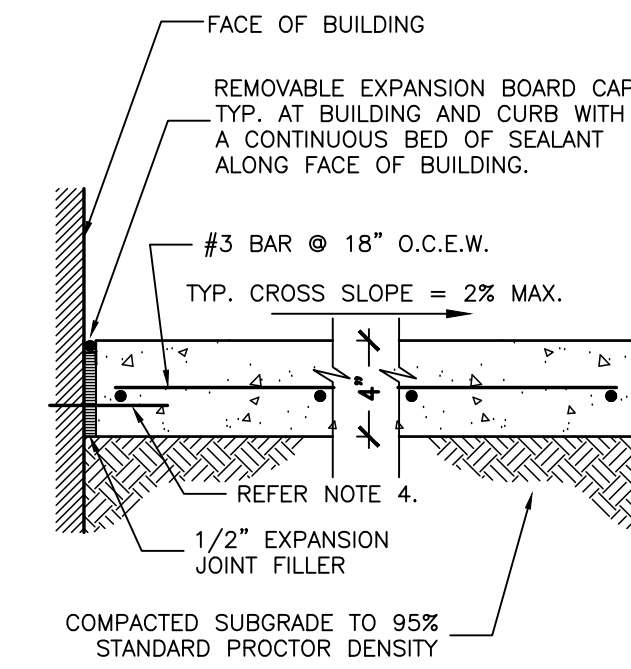


1. HOT MIX ASPHALT: TxDOT ITEM 340, TYPE D, PER COSA TECHNICAL SPECIFICATION ITEM 340.
2. PRIME COAT: MC-30 AT RATE OF 0.20 GAL/SQ. YD. PER COSA TECHNICAL SPECIFICATION ITEM 300 & 310.
3. COMPACTED BASE: CRUSHED LIMESTONE PER TxDOT ITEM 247, TYPE A, GRADE 2, COMPACT TO AT LEAST 97% MODIFIED PROCTOR DENSITY PER COSA TECHNICAL SPECIFICATION ITEM 247.
4. COMPACTED SUBGRADE: SCARIFY, MOISTURE CONDITION, AND COMPACT THE TOP 8" TO AT LEAST 95% STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT WITHIN ±3% POINTS OF THE OPTIMUM MOISTURE CONTENT PER COSA TECHNICAL SPECIFICATION ITEM 200.

2 HMA PAVEMENT SECTION
NO SCALE

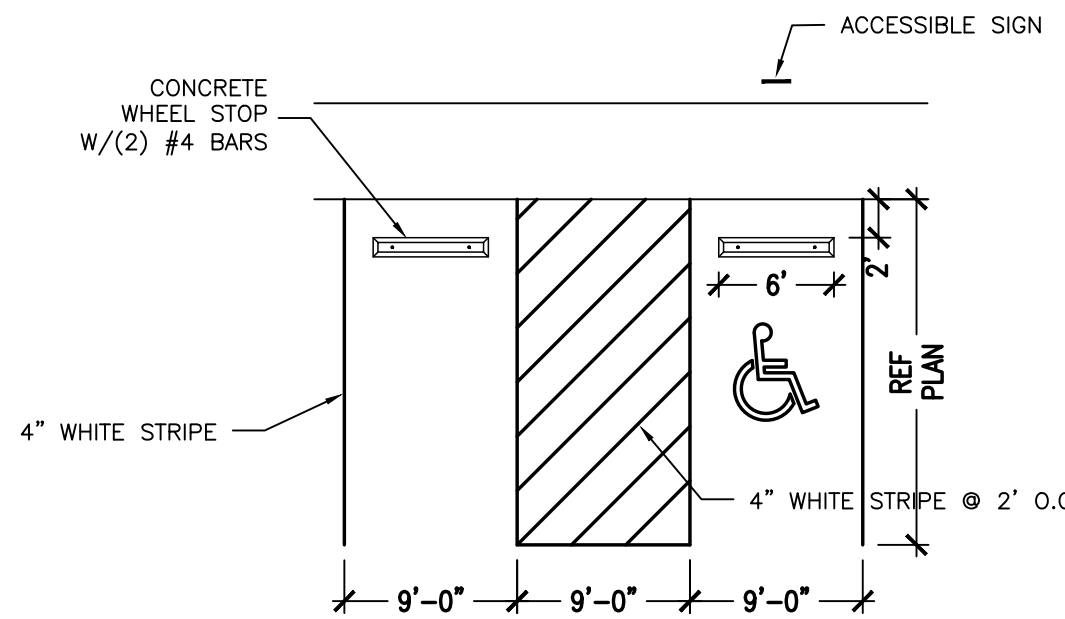


3 EXPANSION, CONSTRUCTION, AND CONTROL JOINT LOCATIONS - AREA PAVING
NO SCALE



1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI, A SLUMP BETWEEN 4 TO 6 INCHES, AN AIR CONTENT BETWEEN 3% AND 6%.
2. SCORE JOINTS ACROSS THE WIDTH OF THE WALK AT A TYPICAL 5' SPACING.
3. INSTALL EXPANSION JOINT AT A SCORE JOINT, SPACING NOT TO EXCEED 40'.
4. PROVIDE 1/2" DOWELS @ 18" O.C. (MIN. 3x) AT DOORWAYS INTO BUILDING.

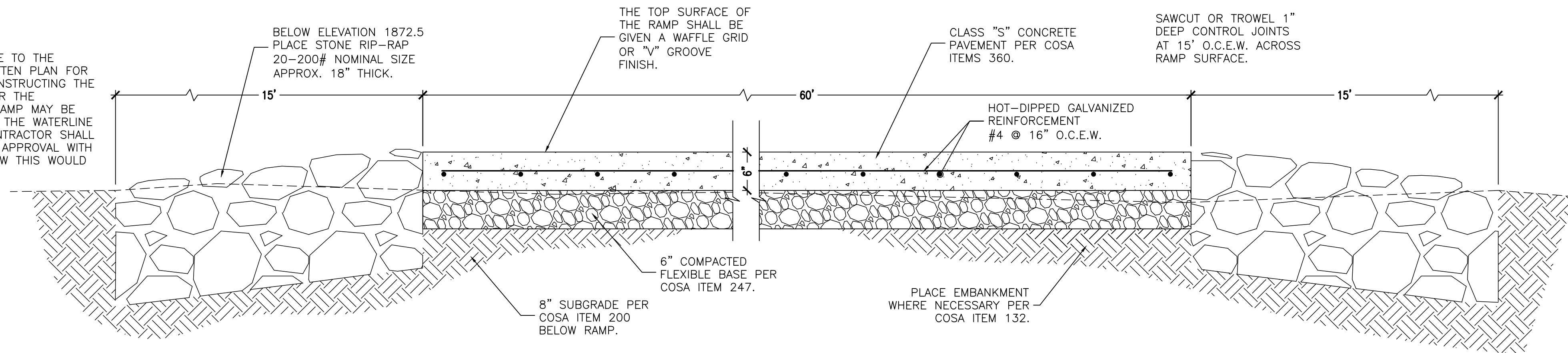
4 SIDEWALK SECTION
NO SCALE



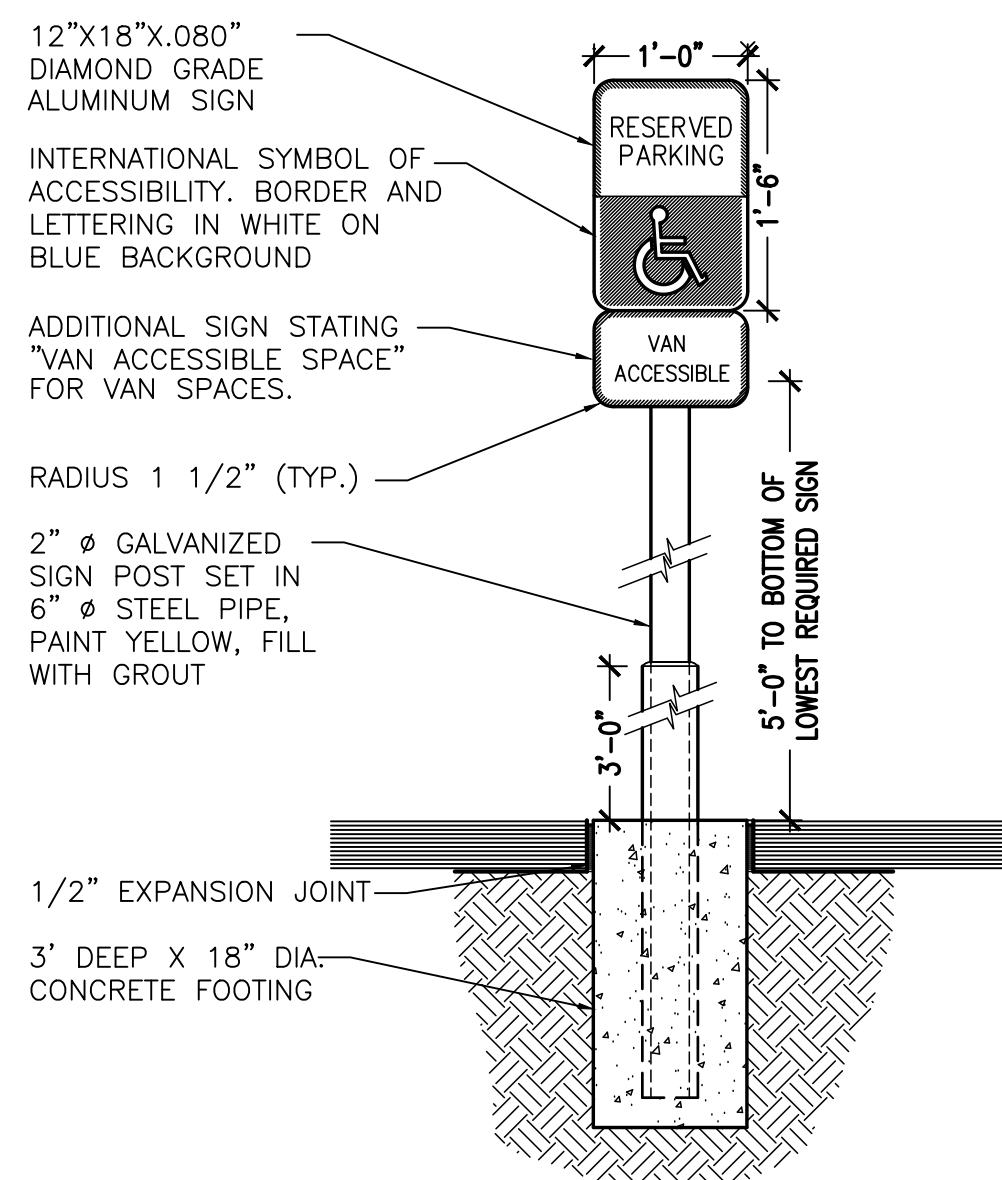
PARKING SPACES AND ACCESS ISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.

5 ACCESSIBLE SPACE DETAIL
NO SCALE

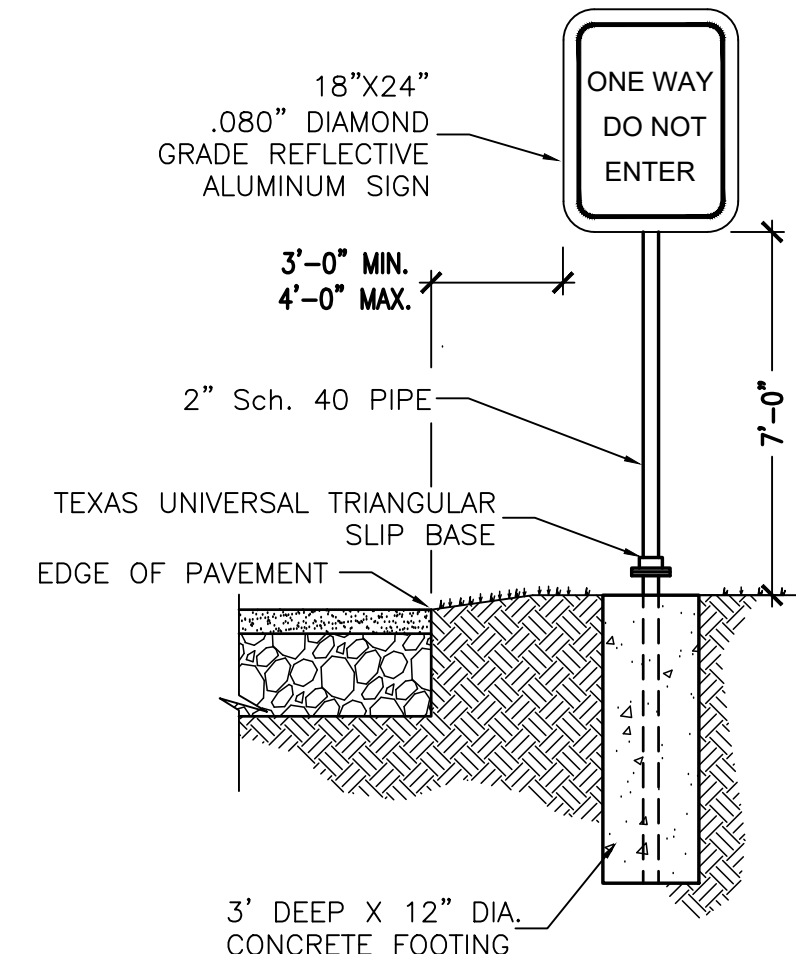
NOTES:
THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER FOR APPROVAL A WRITTEN PLAN FOR BUILDING A COFFERDAM AND CONSTRUCTING THE RAMP IN A DRY ENVIRONMENT OR THE UNDERWATER PORTION OF THE RAMP MAY BE CONSTRUCTED ON GRADE ABOVE THE WATERLINE AND PUSHING INTO PLACE. CONTRACTOR SHALL PROVIDE TO THE ENGINEER FOR APPROVAL WITH A WRITTEN PLAN DESCRIBING HOW THIS WOULD BE ACCOMPLISHED.



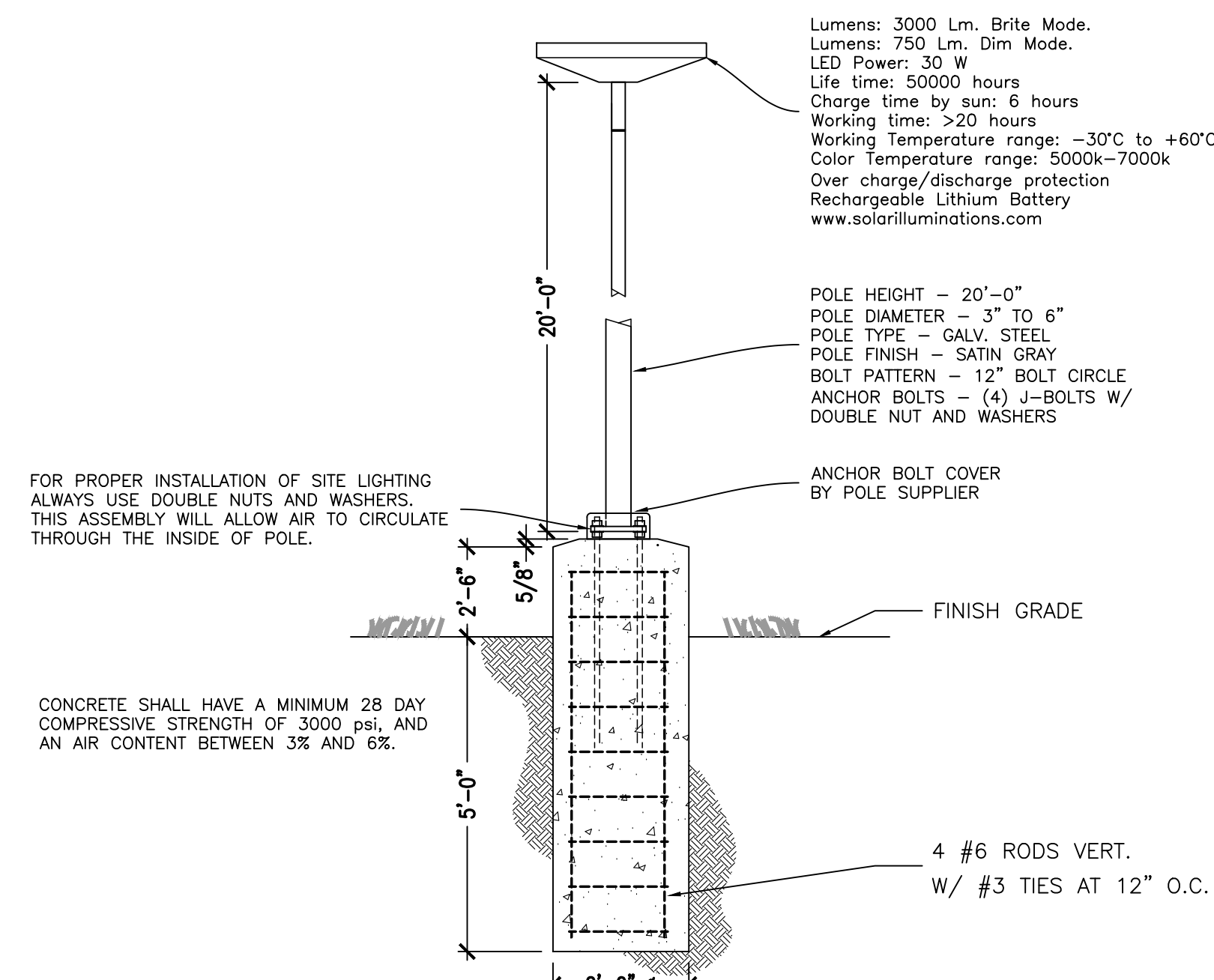
6 BOAT RAMP SECTION
NO SCALE



7 ACCESSIBLE SIGN DETAIL
NO SCALE

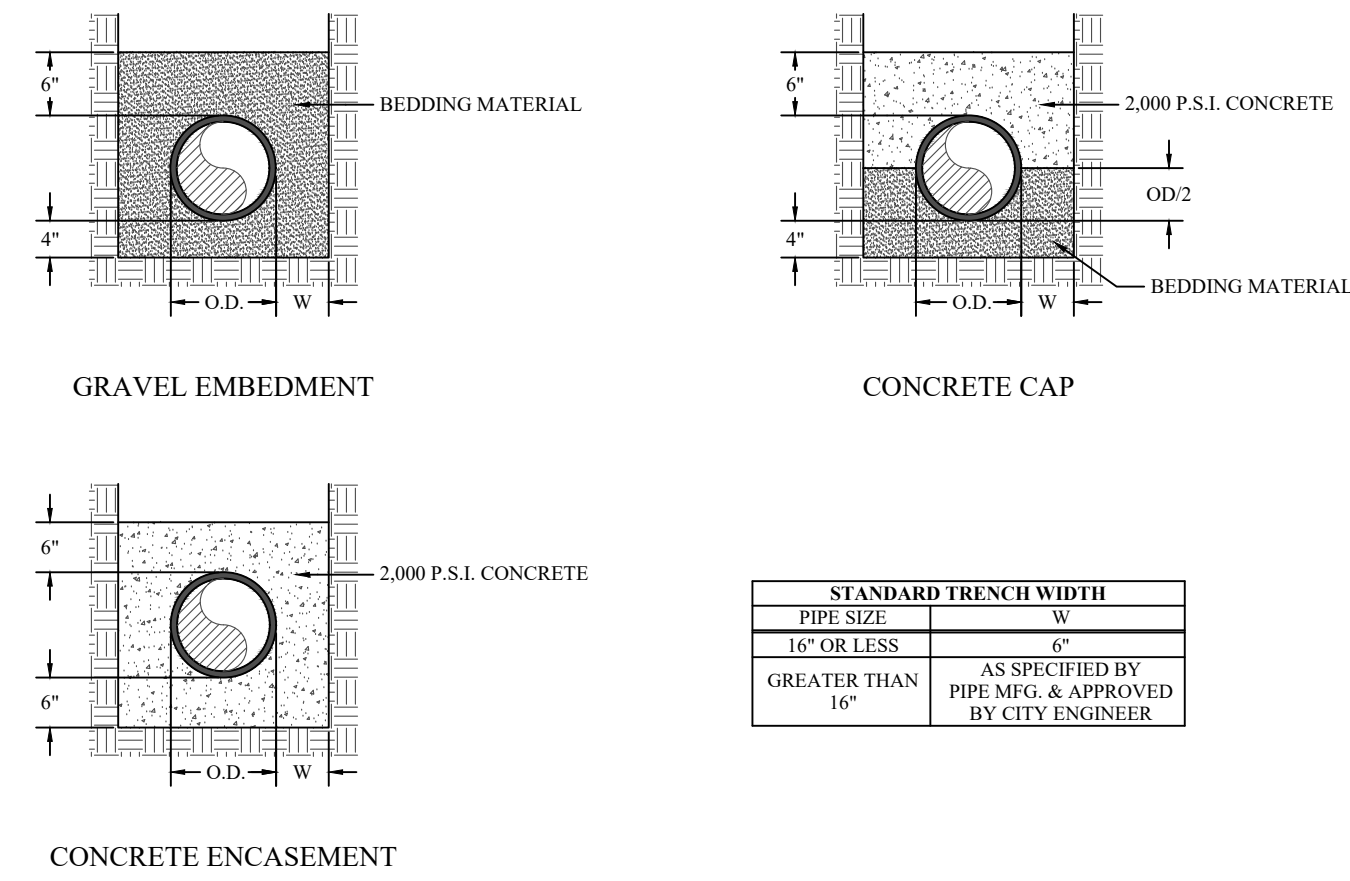


8 TRAFFIC SIGN DETAIL
NO SCALE



9 LIGHTPOLE DETAIL
NO SCALE

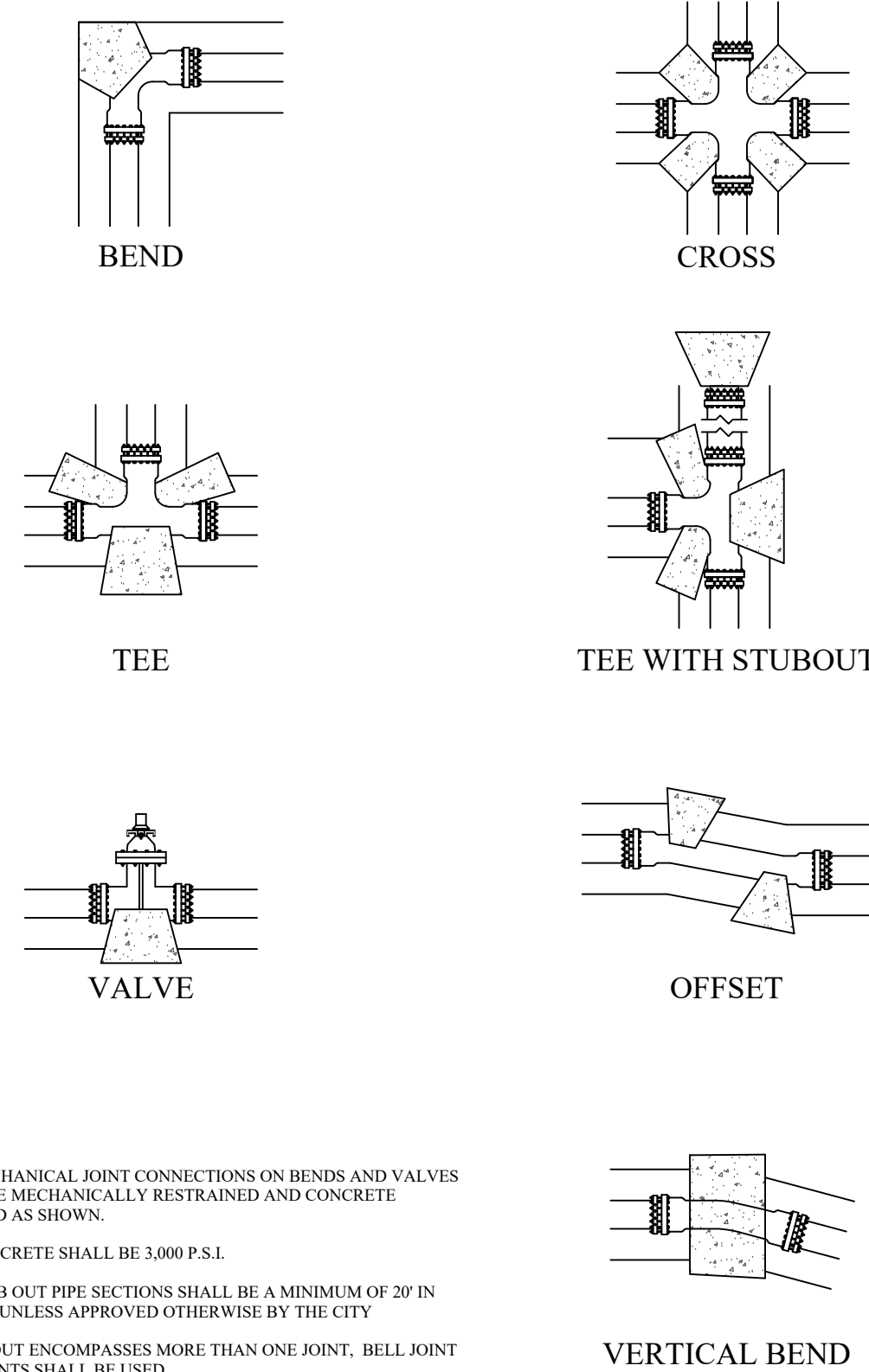
**PIPE EMBEDMENT ZONE
WATER AND SEWER MAINS**



- NOTES:**
- BEDDING MATERIAL FOR THE INSTALLATION OF WATER AND SEWER MAINS SHALL BE CRUSHED STONE OR PEA GRAVEL THAT WILL REMAIN FIRM AND NOT PERMIT DISPLACEMENT OF THE PIPE EITHER DURING PIPE LAYING OR BACKFILLING OR FOLLOWING THE COMPLETION OF CONSTRUCTION.
 - BEDDING MATERIAL SHALL BE FROM AN APPROVED BEDDING MATERIAL SOURCE PER THE LIST OF APPROVED BEDDING SUPPLIERS OR BE APPROVED BY THE CITY ENGINEER.
 - TRENCH SPOILS ARE NOT ACCEPTABLE FOR "EMBEDMENT ZONE MATERIAL"

CITY OF SAN ANGELO
PIPE EMBEDMENT ZONE
WATER AND SEWER MAINS
JUNE 2016 W-BED-1

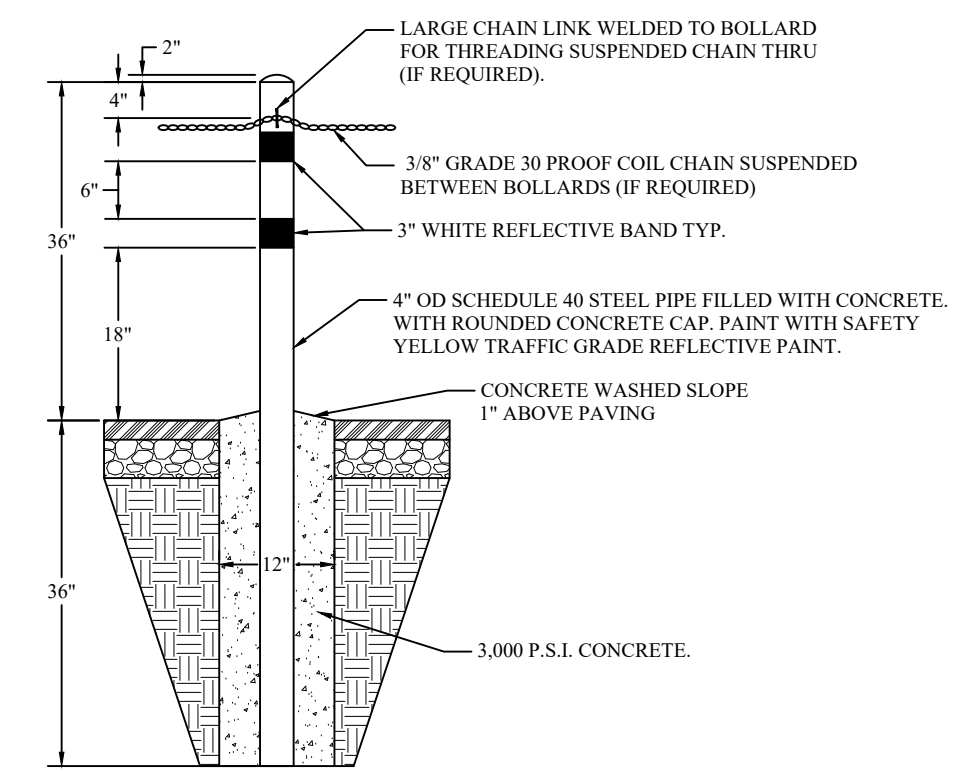
THRUST BLOCKING



- NOTES:**
- ALL MECHANICAL JOINT CONNECTIONS ON BENDS AND VALVES SHALL BE MECHANICALLY RESTRAINED AND CONCRETE BLOCKED AS SHOWN.
 - ALL CONCRETE SHALL BE 3,000 P.S.I.
 - ALL STUB OUT PIPE SECTIONS SHALL BE A MINIMUM OF 20' IN LENGTH UNLESS APPROVED OTHERWISE BY THE CITY
 - IF STUBOUT ENCOMPASSES MORE THAN ONE JOINT, BELL JOINT RESTRAINTS SHALL BE USED.
 - ALL DUCTILE IRON SHALL BE WRAPPED IN MINIMUM 3 MIL. POLY SHEETING

CITY OF SAN ANGELO
THRUST BLOCKING
JUNE 2016 W-TB-1

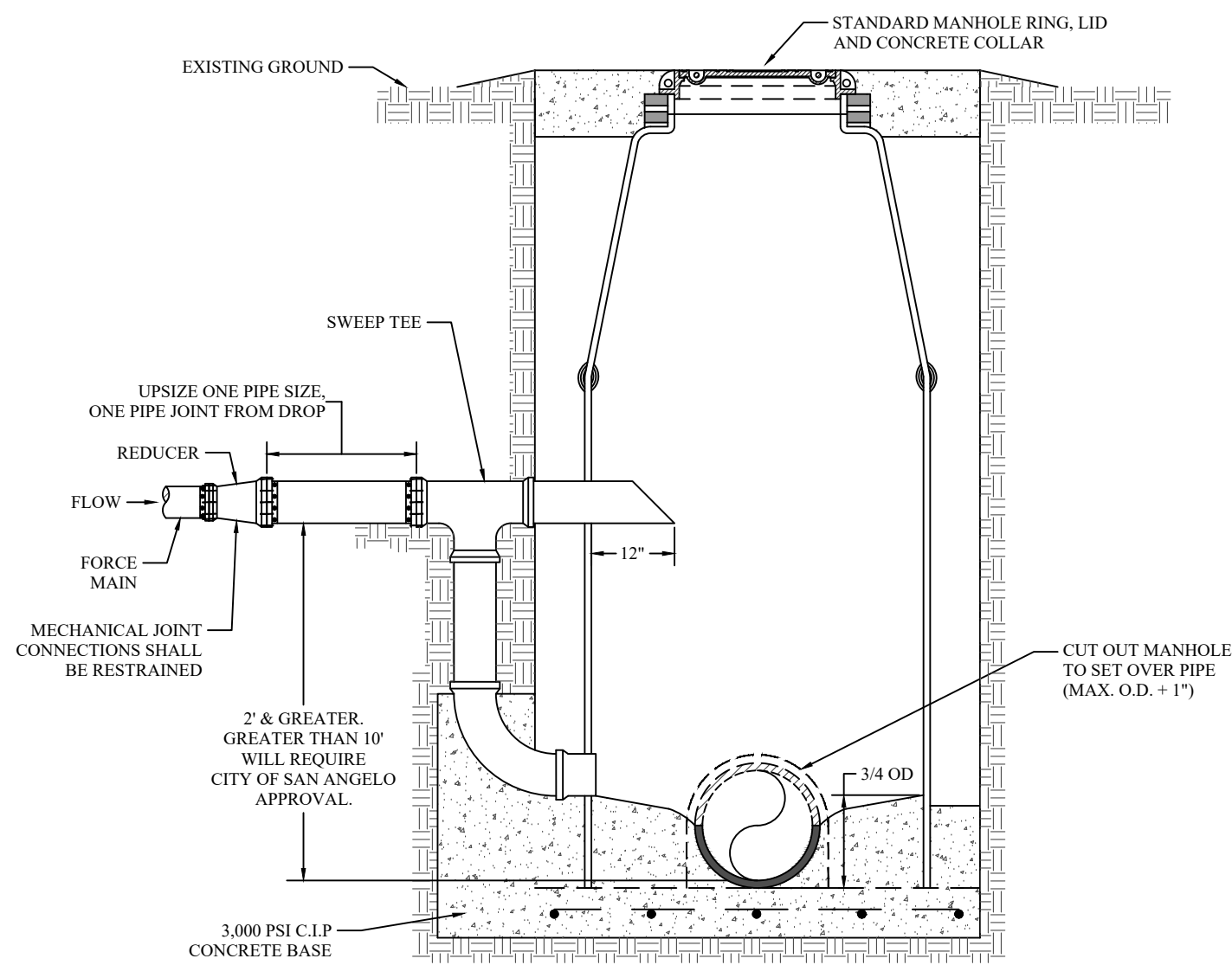
4" PIPE BOLLARD



- NOTES:**
- VERIFY LOCATIONS OF UNDERGROUND UTILITIES BEFORE DIGGING.
 - BOLLARDS SHALL NOT BE PLACED CLOSER THAN 18" TO BACK OF CURB UNLESS OTHERWISE NOTED ON PLANS.
 - WHEN BOLLARDS ARE PLACED AS PERIMETER FOR A FACILITY, TYPICAL SPACING SHALL BE 15 FEET.
 - SUSPENDED CHAIN SHALL BE PULLED TAUGHT TO PROVIDE MINIMUM 18" CLEARANCE FROM GROUND AT LOWEST POINT.
 - TO BEGIN AND END SUSPENDED CHAIN SECURE TO LINK WELDED TO BOLLARD WITH 1/2" SCREW-TYPE QUICK LINK.
 - WHERE SUSPENDING CHAIN ACROSS DRIVEWAY FOR A GATE, WELD ONE SIDE SECURE TO BOLLARD WITH SUFFICIENT LENGTH OF CHAIN TO REACH AND LOCK TO A 12" PIECE OF CHAIN WELDED TO BOLLARD ON OTHER SIDE OF DRIVEWAY.

CITY OF SAN ANGELO
4" PIPE BOLLARD
JUNE 2016 W-BOL

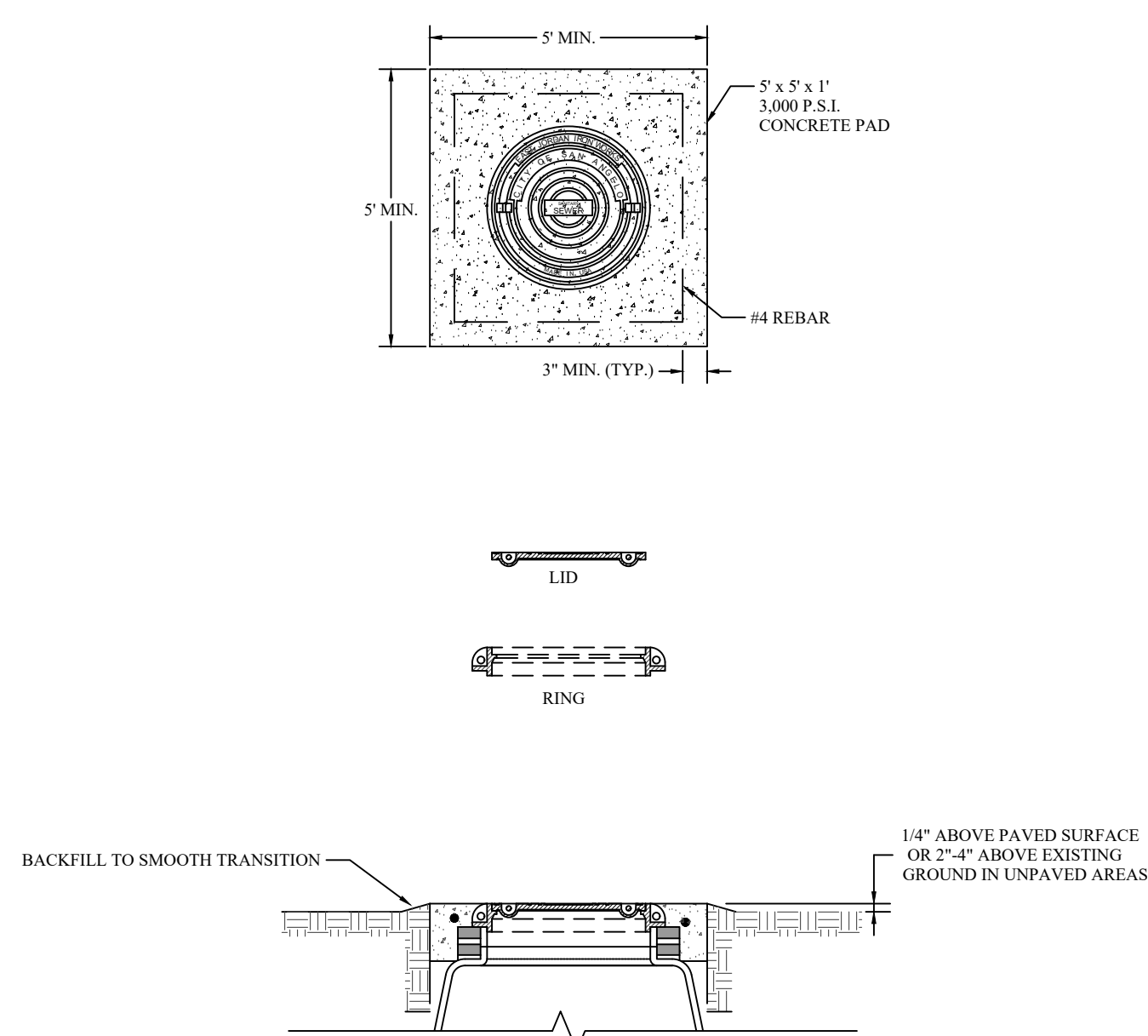
FORCE MAIN UPSIZE INTO DROP MANHOLE



- NOTES:**
- CONSTRUCTION OF THE DROP MANHOLE IS IDENTICAL WITH THE STANDARD MANHOLE A, B AND PRECAST CONCRETE MANHOLE IN EVERY RESPECT EXCEPT THE METHOD OF ENTRANCE OF THE SEWAGE FROM THE LATERALS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
 - WHEN ENTERING AN EXISTING MANHOLE WITH A NEW LINE AND THE DIFFERENCE IN ELEVATION OF THE TWO INVERTS EXCEEDS 2' THE METHOD OF ENTRANCE SHALL BE AS ABOVE.
 - BACKFILL SHALL BE COMPACTED IN 6" HORIZONTAL LAYERS MINIMUM DENSITY 95% MODIFIED PROCTOR.
 - FORCE MAINS SHALL DISCHARGE DIRECTLY INTO A MANHOLE OR WET-WELL WITH CONSIDERATION FOR MINIMIZING SPLASHING AND THE GENERATION OF DAMAGING AND MALODOROUS GASES.
 - MANHOLES AND WET-WELLS RECEIVING FORCE MAIN DISCHARGE SHALL BE CONSTRUCTED OF FIBERGLASS OR CONCRETE WITH AN APPROVED PROTECTIVE COATING SYSTEM.

CITY OF SAN ANGELO
FORCE MAIN UPSIZE INTO DROP MANHOLE
JUNE 2016 W-SA-MH-FMD

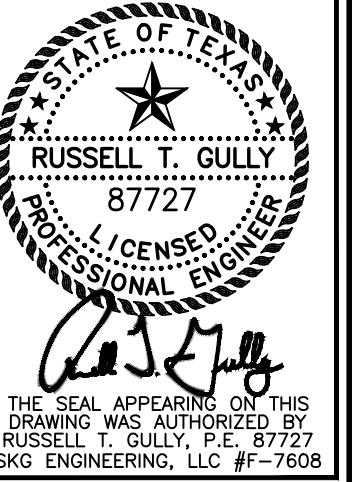
SEWER MANHOLE RING & LID WITH CONCRETE COLLAR



- NOTES:**
- MANHOLE RING (V-1420) & LID (V-1430) SHALL BE EAST JORDAN IRON WORKS OR APPROVED EQUAL WITH "CITY OF SAN ANGELO" CUSTOM LETTERING.
 - WATER TIGHT, BOLT-DOWN SPECIFIED RING (V-1420) & LID (V-1430) SHALL BE EAST JORDAN IRON WORKS OR APPROVED EQUAL WITH AN INFLOW PREVENTION DEVICE (IPD).
 - MANHOLE RING & LID SHALL BE MACHINE FITTED WITH TWO (2) PICK BAR SLOTS.
 - MANHOLE RING AND COVER SHALL BE CAST IRON, MEETING THE LATEST REVISION OF ASTM A-48 CLASS 30 WITH A HIGHWAY LOAD RATING OF H-20.
 - MANHOLES LOCATED WITHIN A 100-YEAR FLOOD PLAIN OR ANY AREA SUBJECT TO STORMWATER INFILTRATION SHALL INCORPORATE A WATERTIGHT, BOLT-DOWN RING AND LID AND AN INFLOW PREVENTION DEVICE (IPD).
 - MANHOLES LOCATED WITHIN UNDEVELOPED AREAS, AGRICULTURAL FIELDS, OR ANY AREA SUBJECT TO BEING OVERTGROWN OR OTHERWISE OBSCURED SHALL INCORPORATE A BOLLARD AT EACH CORNER OF THE CONCRETE COLLAR, FOUR (4) TOTAL.

CITY OF SAN ANGELO
SEWER MANHOLE RING & LID WITH CONCRETE COLLAR
JUNE 2016 W-SA-LID

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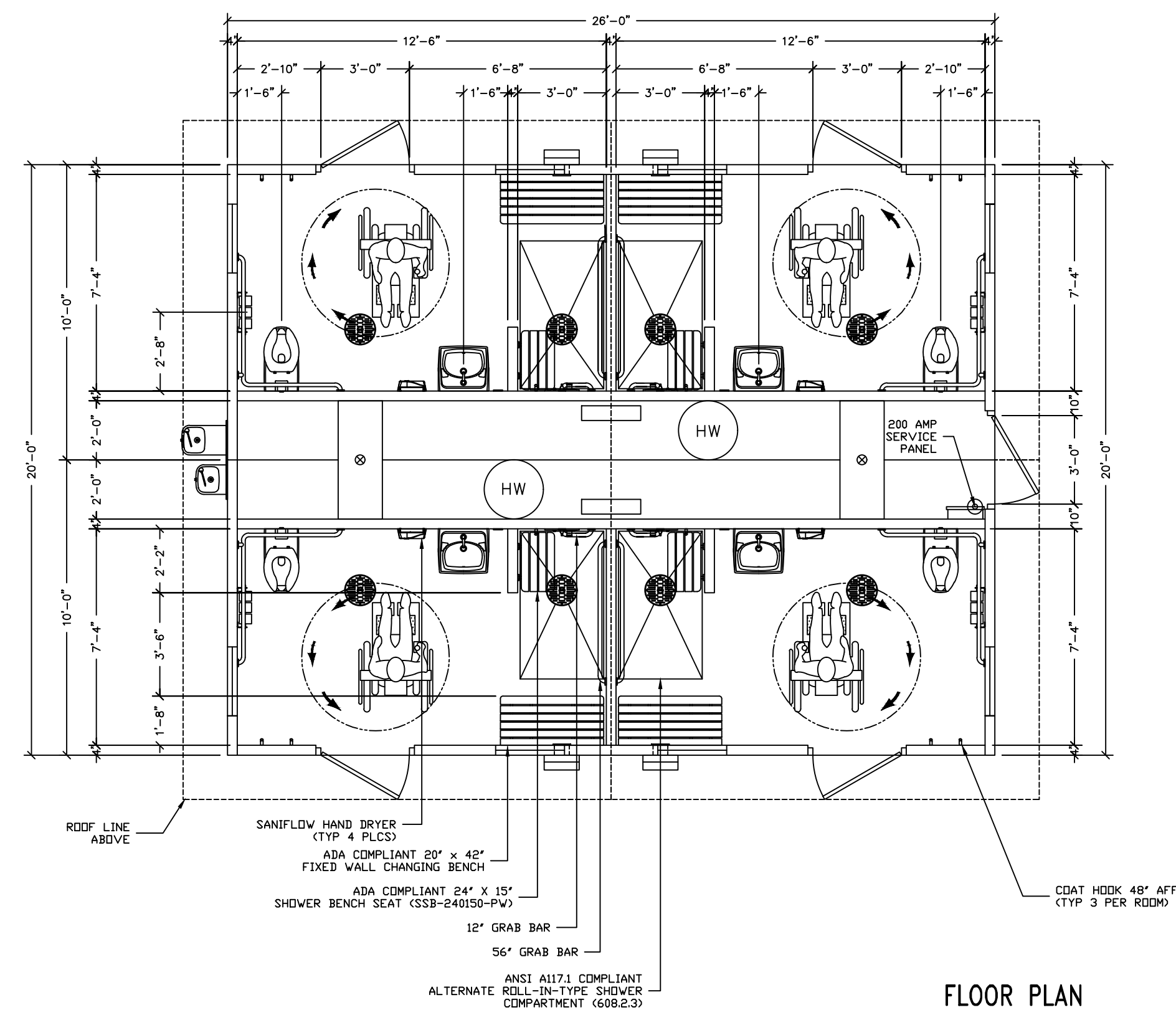


**MIDDLE CONCHO BOAT
RAMP IMPROVEMENTS
MIDDLE CONCHO PARK
SAN ANGELO, TEXAS**

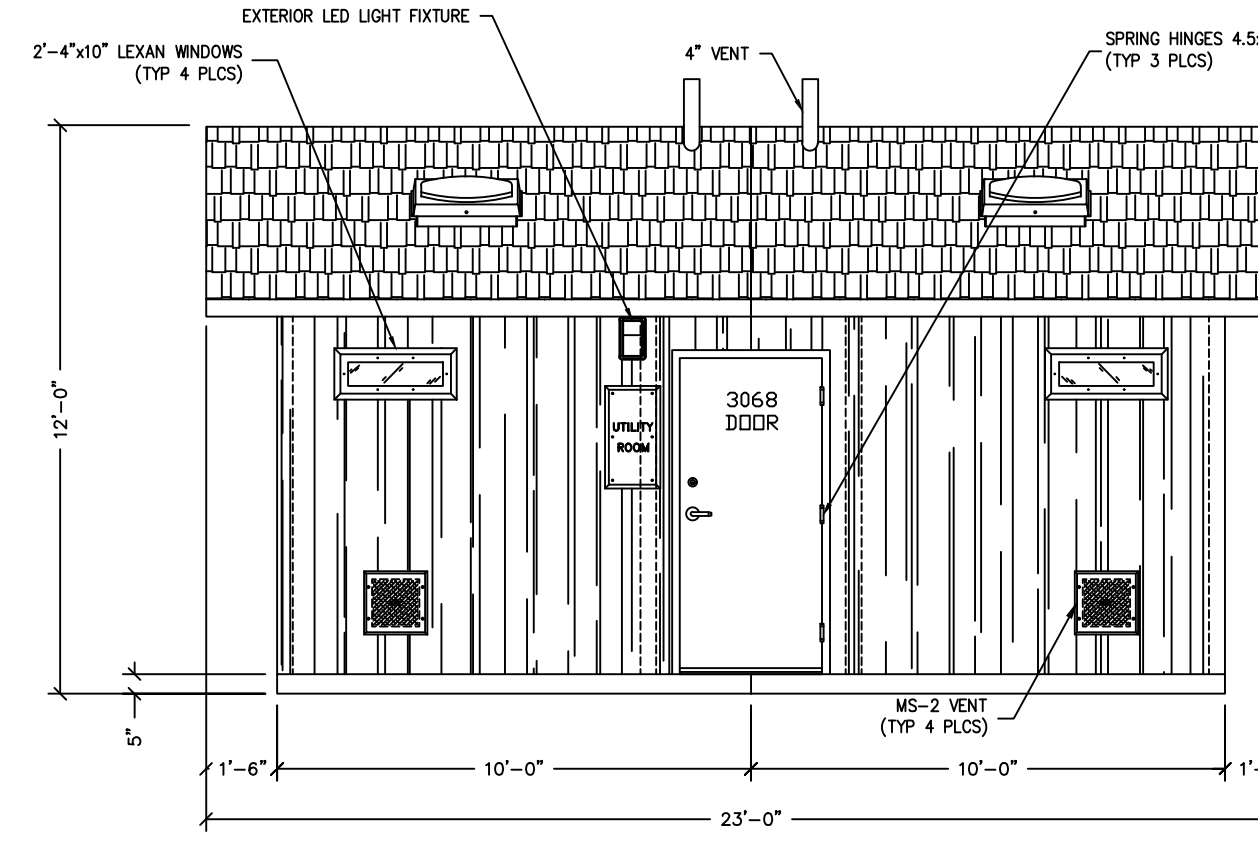
UTILITY
DETAILS

REVISIONS

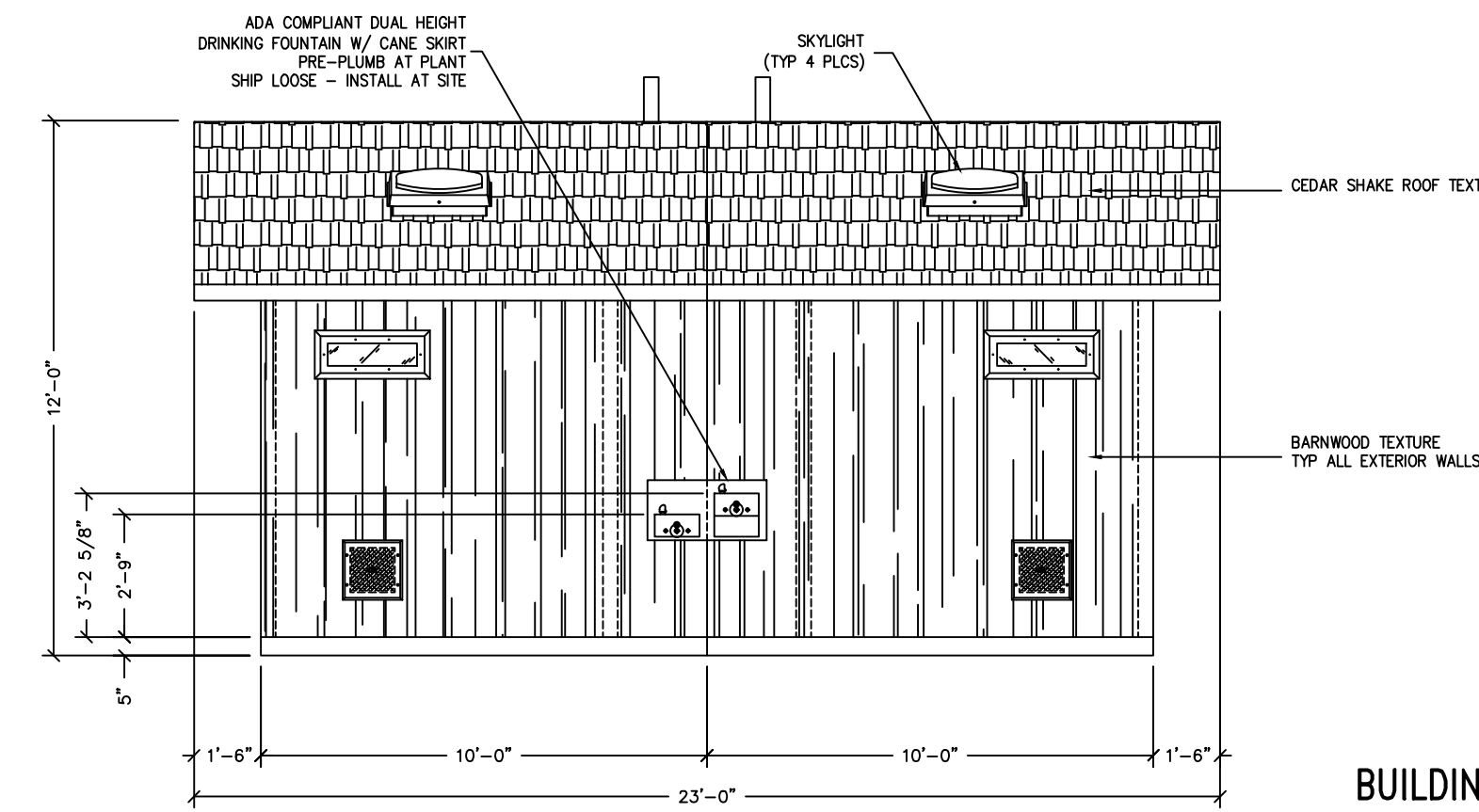
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JOB NO. 19-E-0890	SHEET NO. C5.2
SCALE: N.T.S.	M-



FLOOR PLAN

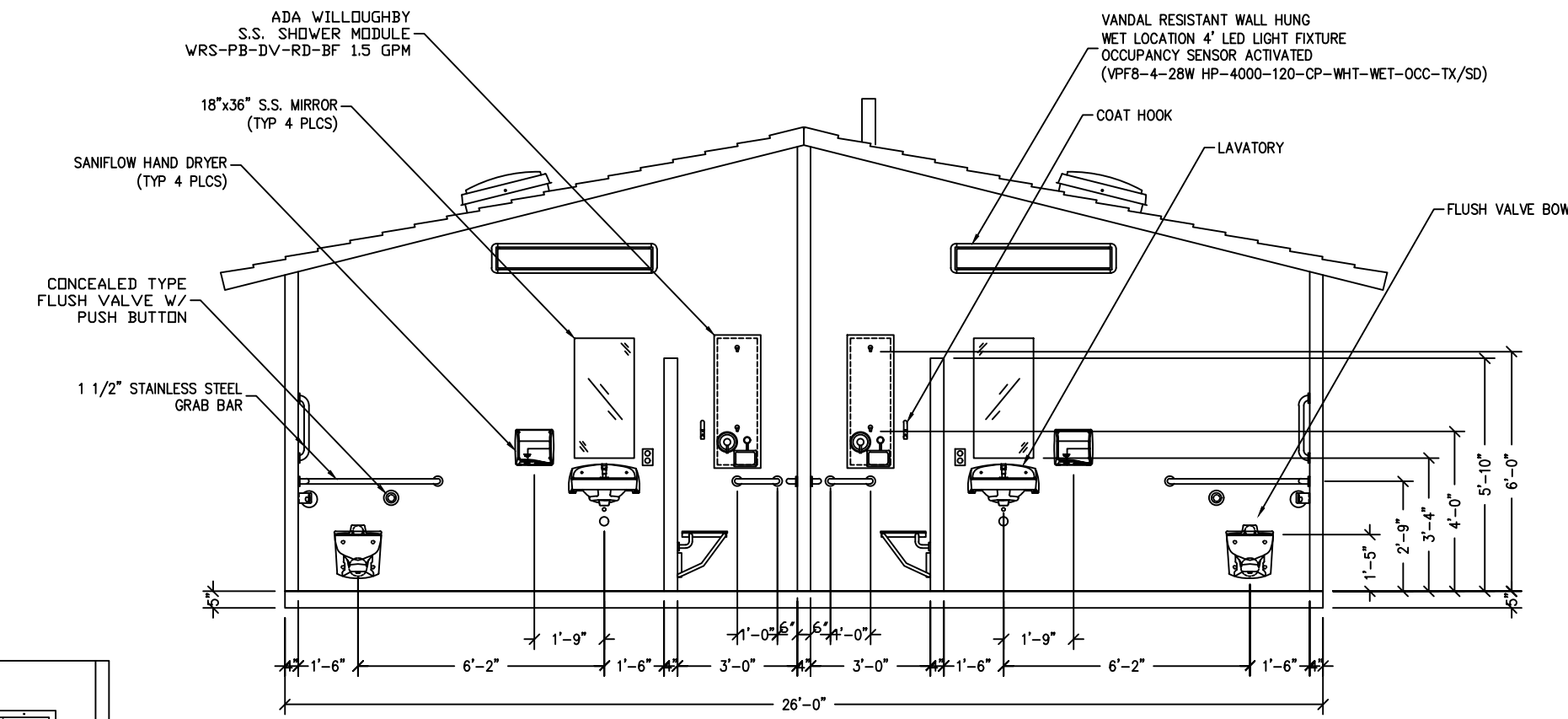


RH SIDE ELEVATION

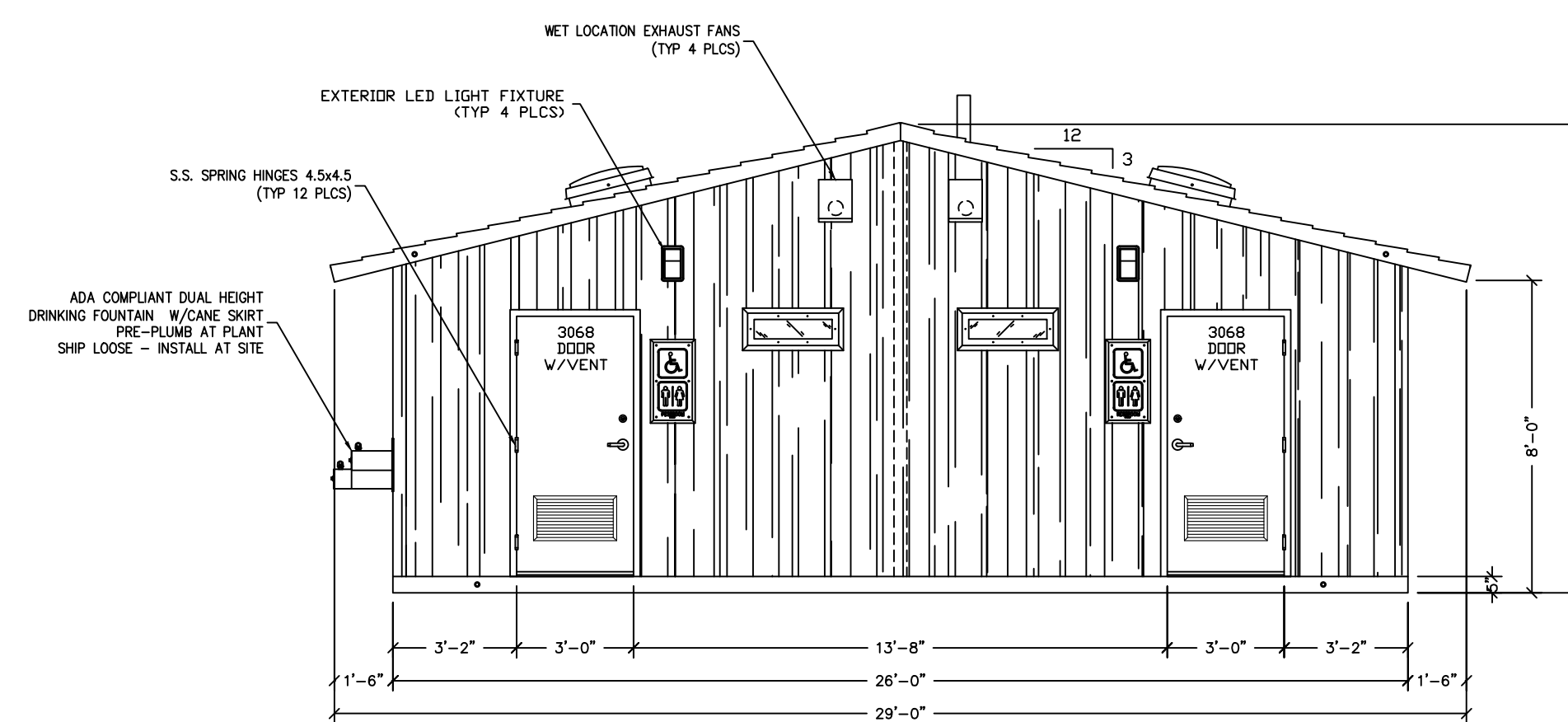


LH SIDE ELEVATION

BUILDING ELEVATIONS

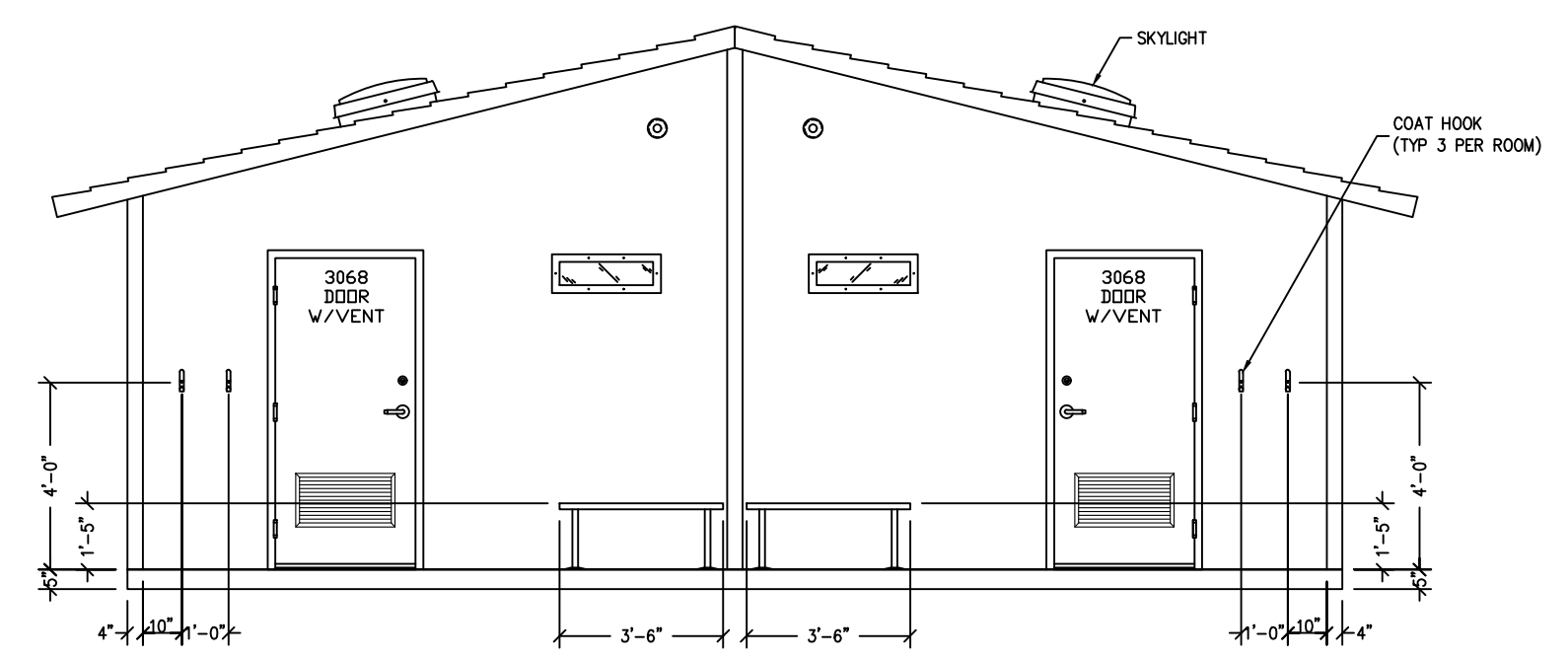
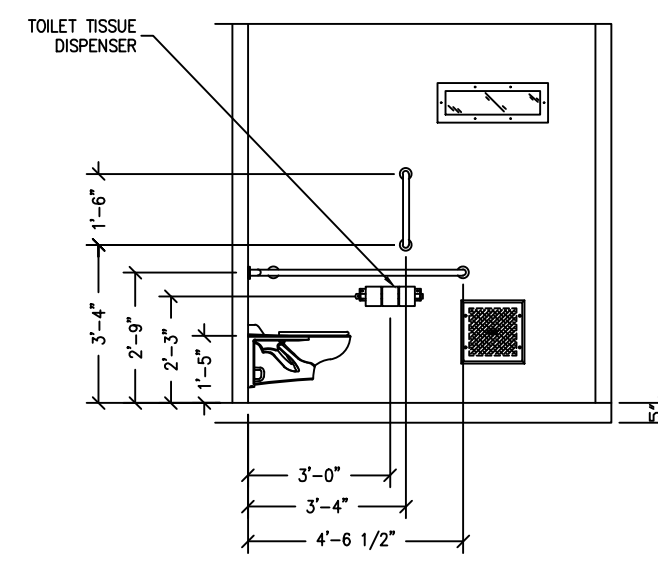


FRONT ELEVATION



REAR ELEVATION

BUILDING ELEVATIONS



INTERIOR ELEVATIONS

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LICENSED PROFESSIONAL ENGINEER

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RUSSELL T. GULLY, P.E. 87727
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**MIDDLE CONCHO BOAT
RAMP IMPROVEMENTS
MIDDLE CONCHO PARK
SAN ANGELO, TEXAS**

BUILDING DETAILS

REVISIONS	

DWG BY: RTG	DWG DATE: FEB. 6, 2020
JOB NO: 19-E-0890	SHEET NO:
SCALE: VARIES	A1.1