

SITE DEVELOPMENT PLANS

EAST STREET TOWNHOMES
MULTIFAMILY DEVELOPMENT

PREPARED FOR
MIDTOWN DEVELOPMENT, LLC

JONESBORO, ARKANSAS
JULY 14, 2016

LOCAL CONTACTS

CITY OF JONESBORO - PLANNING & ZONING DEPARTMENT
300 South Church Street
Jonesboro, AR 72401
PH-870-932-0406

CITY OF JONESBORO - ENGINEERING DEPARTMENT
300 South Church Street
Jonesboro, AR 72401
PH-870-932-2438

CITY OF JONESBORO - FIRE SAFETY DEPARTMENT
3215 East Johnson
Jonesboro, AR 72401
PH-870-932-2428

CITY WATER & LIGHT - ENGINEERING DEPARTMENT
400 East Monroe
Jonesboro, AR 72401
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ARKANSAS STATE HIGHWAY DEPARTMENT - R.O.W. PERMITS
2510 Hwy. 412 West
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Paragould, AR 72451
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ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
2212 Fowler Ave. - Suite B
Jonesboro, AR 72401 72401
PH-870-935-7221

CENTERPOINT ENTERGY
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Jonesboro, AR 72401
PH-800-555-6322

AT&T
723 South Church
Jonesboro, AR 72401
PH-870-972-7600

RITTER COMMUNICATIONS
2109 Fowler Ave.
Jonesboro, AR 72401
PH-870-336-3421

SUDDENLINK
1520 South Caraway
Jonesboro, AR 72401
PH-870-897-5697

VICINITY MAP



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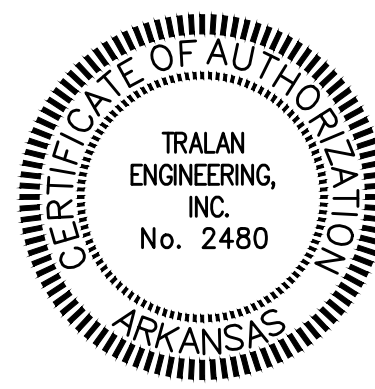
- TITLE PAGE
- TOPOGRAPHIC SURVEY
- SWPPP / DEMO
- SITE DIMENSION PLAN
- GRADING AND DRAINAGE PLAN
- SITE CONSTRUCTION DETAILS
- SWPPP DETAILS

COMPANY INFO:
2916 WOOD STREET
JONESBORO, AR 72404
PH: 1-870-203-9939
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PROJECT:
EAST STREET TOWNHOMES

CLIENT:
MATH INVESTMENTS, LLC

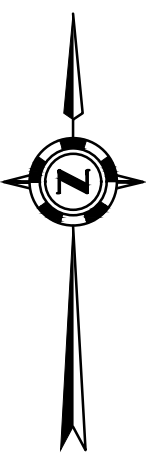


REVISIONS		
DATE	BY	DESCRIPTION

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SCALE:	
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TITLE
PAGE

SHEET NUMBER:
1 of 7



VICINITY MAP
NOT TO SCALE

PART OF LOT 10 OF COBB'S SURVEY OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 18, TOWNSHIP 14 NORTH, RANGE 4 EAST, AND PART OF LOT 12-1 OF JONESBORO URBAN RENEWAL AND HOUSING AUTHORITY FIRST REPLAT, CRAIGHEAD COUNTY, ARKANSAS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 12-1 OF JONESBORO URBAN RENEWAL AND HOUSING AUTHORITY FIRST REPLAT; THENCE N89°06'09"E ALONG THE SOUTHERLY RIGHT-OF-WAY OF CATE AVENUE, A DISTANCE OF 142.28 FEET TO THE WESTERLY RIGHT-OF-WAY OF EAST STREET; THENCE S01°14'25"E ALONG SAID WESTERLY RIGHT-OF-WAY, A DISTANCE OF 168.90 FEET; THENCE LEAVING SAID WESTERLY RIGHT-OF-WAY, S89°36'30"W, A DISTANCE OF 76.55 FEET; THENCE N01°14'03"W, A DISTANCE OF 83.48 FEET; THENCE N04°01'49"E, A DISTANCE OF 14.90 FEET; THENCE N44°33'30"E, A DISTANCE OF 84 FEET TO A POINT ON A CURVE TO THE LEFT; THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 43.11 FEET; SAID CURVE HAVING A RADIUS OF 30.00 FEET, A CHORD BEARING OF N49°35'22"W, AND A CHORD DISTANCE OF 39.50 FEET; THENCE S89°15'21"W, A DISTANCE OF 17.00 FEET; THENCE N00°34'44"W, A DISTANCE OF 52.92 FEET TO THE POINT OF BEGINNING, CONTAINING 0.39 ACRES, MORE OR LESS, SUBJECT TO ALL RIGHTS-OF-WAY AND EASEMENTS OF RECORD.

I, JASON D. BEARD, PROFESSIONAL LAND SURVEYOR NO. 1691, DO HEREBY CERTIFY THAT A BOUNDARY SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THIS PLAT ACCURATELY REFLECTS MONUMENTS, BOTH FOUND AND SET, TO THE BEST OF MY KNOWLEDGE AND ABILITY.

1. SUBJECT PROPERTY IS CURRENTLY ZONED C-1.
2. BASIS OF BEARING: ARKANSAS STATE PLANE, GRID NORTH ZONE(0301).
3. THE SITE VERTICAL BENCHMARK IS A CUT SQUARE ON THE EAST SIDE OF A CONCRETE LIGHT POLE BASE AS SHOWN ON PLANS.
ELEV = 323.20'
- VERTICAL CONTROL - NAVD 88
HORIZONTAL CONTROL - AR STATE PLANE GRID NORTH ZONE-NAD 83
4. ALL MONUMENTS SET ARE ¾" REBAR WITH BLUE PLASTIC CAP STAMPED BEARD PS 1691, UNLESS OTHERWISE NOTED.
5. REFERENCE DOCUMENTS USED IN THIS SURVEY:
 - WARRANTY DEED J82013R-007074, RECORDED IN THE CRAIGHEAD COUNTY COURTHOUSE, JONESBORO, ARKANSAS
 - WARRANTY DEED J82013R-007076, RECORDED IN THE CRAIGHEAD COUNTY COURTHOUSE, JONESBORO, ARKANSAS
 - COBB'S SURVEY OF THE NW 1/4, SE 1/4, SEC 18, T 14 N, R 4 E, DATED 5/20/1917.
 - JONESBORO URBAN RENEWAL AND HOUSING AUTHORITY FIRST REPEAT BY J.L. SCRAPE P.S. 515, DATED 4/9/1975.
 - PLAT OF SURVEY BY TERRENCE D. MOORE P.S. 1293, DATED 3/22/2013.
6. NOTES ARE RECORDED IN SURVEY BOOK 1, PAGES 11-12.
7. THE LOCATIONS AND SIZES OF EXISTING UNDERGROUND UTILITIES SHOWN ARE BASED FIELD MEASUREMENTS AND EXISTING UTILITY MAPS. ITALIAN ENGINEERING, INC. MAKES NO GUARANTEE TO THE EXACT LOCATION OF THE UTILITIES SHOWN ON THESE PLANS. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM LOCATIONS SHOWN. NO EXCAVATIONS WERE MADE TO LOCATE BURIED UTILITIES OR STRUCTURES.
ARKANSAS ONE CALL TICKET # 150422-1022
8. THERE HAS BEEN NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP, TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE TITLE SEARCH MAY DISCLOSE.

LINE #	DIRECTION	DISTANCE
L1	S89°15'02"W	14.49'
L2	N44°33'30"W	7.84'
L3	S89°15'21"W	17.00'

CURVE #	CHORD DIRECTION	CHORD DISTANCE	RADIUS	ARC LENGTH	DELTA
C1	N49°35'22"W	39.50'	30.00'	43.11'	82.3359°

- FOUND (X) REBAR P.S. 1293
(UNLESS NOTED OTHERWISE)
- △ SET MONUMENT
- CALCULATED (NOT SET)
- ⊕ CONTROL POINT
- ⊙ BENCHMARK
- ⚡ GUY WIRE
- UTILITY POLE
- ⊞ ELECTRIC METER
- ⊞ ELECTRIC BOX
- ⊞ TELECOMMUNICATION PEDESTAL
- SIGN (AS NOTED)
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- ⊞ GRATE INLET
- ⊞ FIRE HYDRANT
- ⊞ WATER METER
- ⊞ WATER VALVE
- ⊞ GAS METER
- OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- TELECOMMUNICATION LINE
- WATER LINE
- SS SANITARY SEWER LINE
- GAS GAS LINE
- WOOD PRIVACY FENCE

REVISIONS		
DATE	BY	DESCRIPTION

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CLIENT:
OAK STREET PROPERTIES, LLC

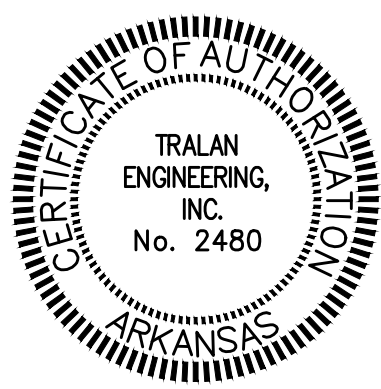
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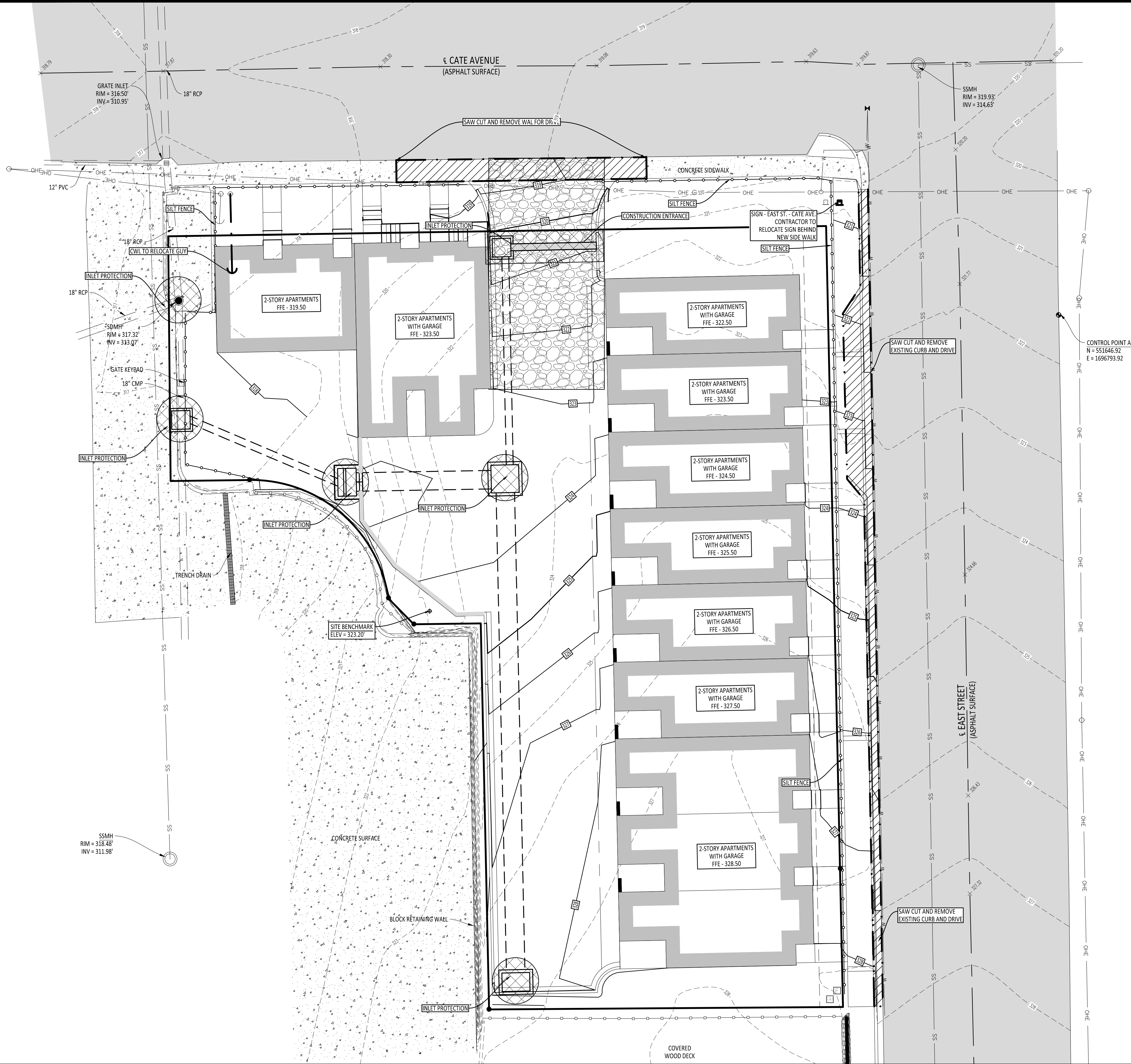
COMPANY INFO:
2916 WOOD STREET
JONESBORO, AR 724
PH: 1-870-203-999
WWW.TRALANENG

TRALAN ENGINEERING

TOPOGRAPHIC SURVEY

PART OF LOT 10 OF COBB'S SURVEY OF THE NW 1/4, SE 1/4 OF SEC. 18, T 14 N, R 4 E AND A PART OF LOT 12-1 OF JONESBORO UEBAN RENEWAL AND HOUSING AUTHORITY FIRST REPLAT



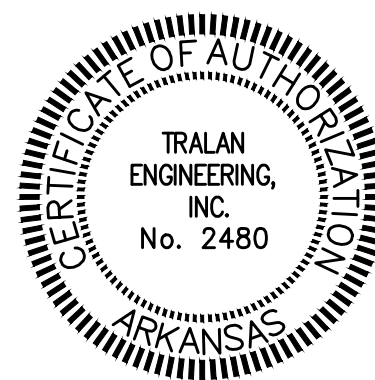


VICINITY MAP
NOT TO SCALE

- ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED BEFORE THE COMMENCEMENT OF ANY LAND DISTURBANCE ACTIVITIES.
- ALL TRAFFIC THAT EXITS THE CONSTRUCTION SITE MUST USE THE CONSTRUCTION ENTRANCE. ANY SEDIMENT THAT IS TRACKED OFF-SITE, MUST BE REMOVED IMMEDIATELY.
- ALL CONCRETE TRUCK WASHOUT MUST BE CONFINED TO THE LOCATION SHOWN ON THIS PLAN.
- A TEMPORARY SANITARY FACILITY MUST BE PLACED ON THIS JOBSITE.
- ALL SWPPP DOCUMENTS MUST BE UPDATED IMMEDIATELY, IF ANY CHANGE IS MADE TO THIS PLAN DURING CONSTRUCTION.
- ALL CONTROL MEASURES MUST BE WELL MAINTAINED DURING ALL CONSTRUCTION ACTIVITIES TO ENSURE MINIMAL OFF-SITE ACCUMULATION OF SEDIMENT.
- CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL LOCAL, STATE, AND FEDERAL PERMITS RELATED TO ALL CLEARING/DEMOLITION ACTIVITIES.
- CONTRACTOR SHALL KEEP AN ORDERLY WORK SITE AND SHALL DISPOSE OF ALL CONSTRUCTION DEBRIS IN ACCORDANCE WITH ALL LOCAL, STATE, AND/OR FEDERAL REGULATIONS.
- THE LOCATIONS AND SIZES OF EXISTING UNDERGROUND UTILITIES SHOWN ARE BASED FIELD MEASUREMENTS AND EXISTING UTILITY MAPS. TRALAN ENGINEERING, INC. MAKES NO GUARANTEE TO THE EXACT LOCATION OF THE UTILITIES SHOWN ON THESE PLANS. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM LOCATIONS SHOWN. NO EXCAVATIONS WERE MADE TO LOCATE BURIED UTILITIES OR STRUCTURES.
- BEFORE ANY CLEARING OR EXCAVATIONS ARE MADE, THE CONTRACTOR SHALL CONTACT THE ARKANSAS ONE-CALL AT 811 AT LEAST TWO DAYS PRIOR TO THE COMMENCEMENT OF ANY SAID ACTIVITY.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO EXISTING FACILITIES AND/OR ADJACENT PROPERTIES, AND SHALL BE RESPONSIBLE FOR DAMAGE THAT MAY OCCUR.

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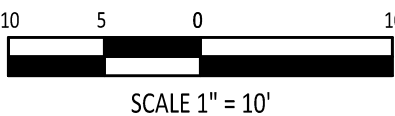


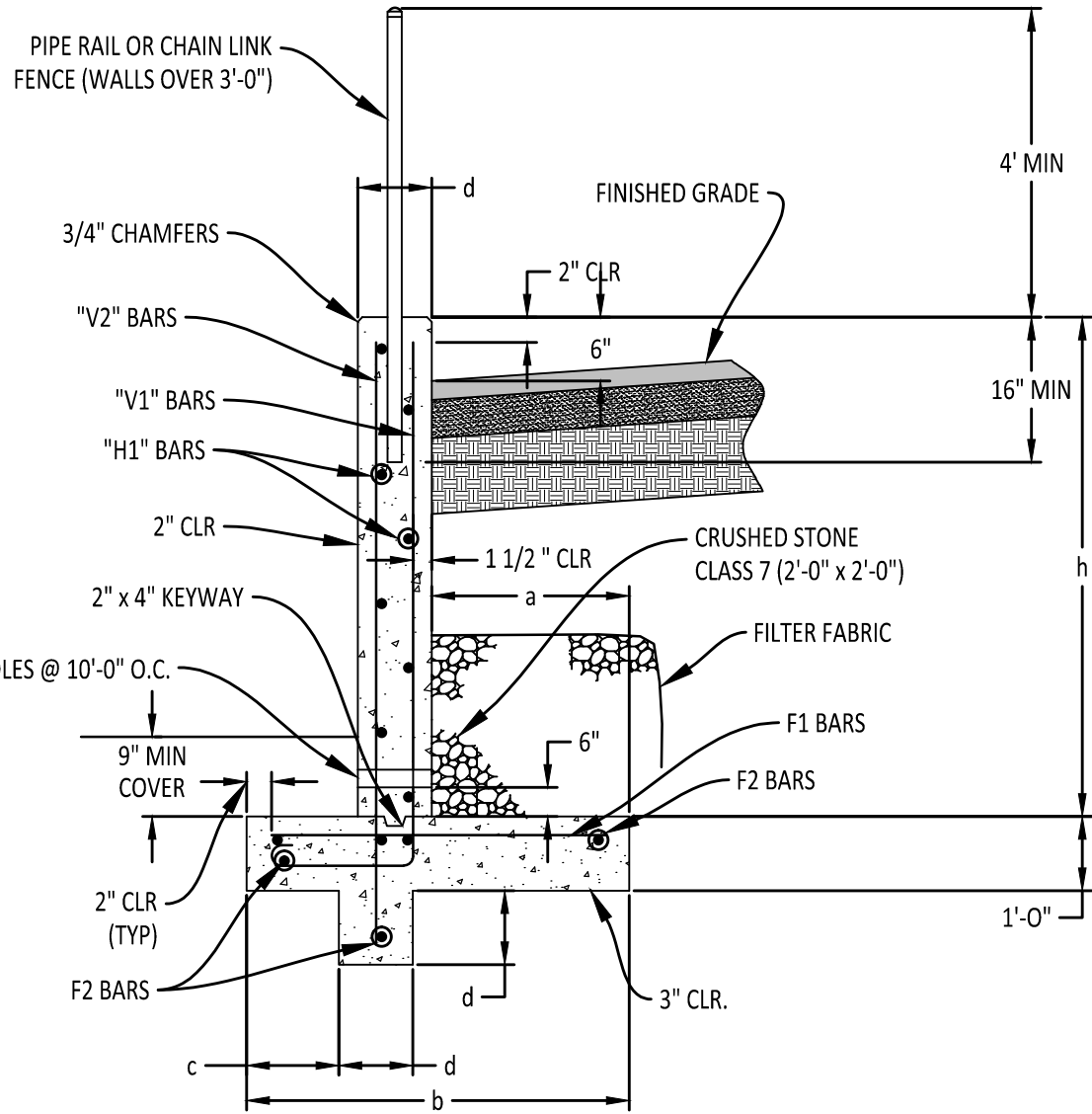
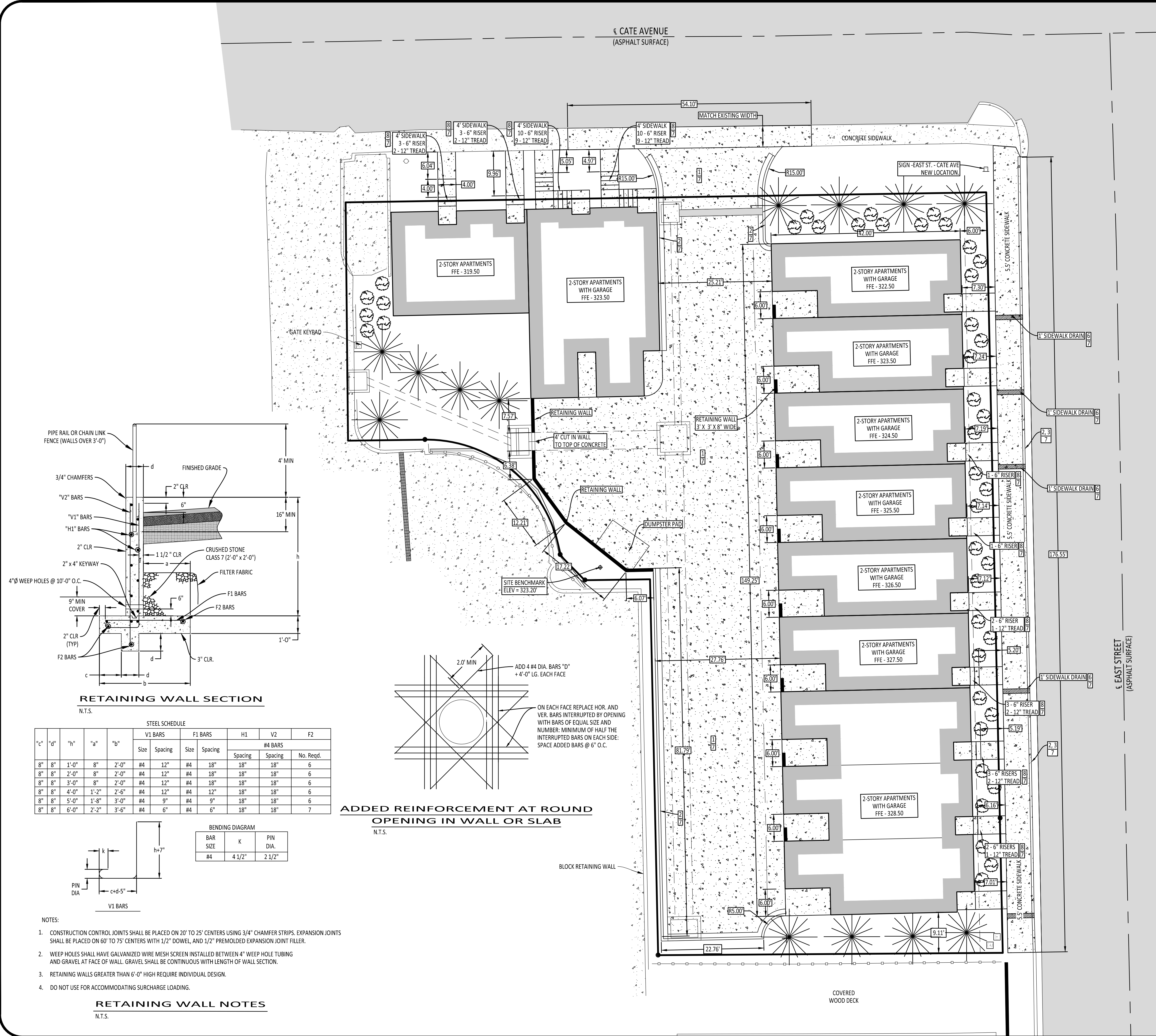
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SWPPP / DEMO
PLAN

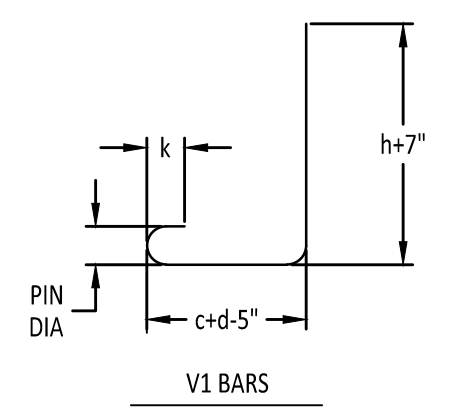
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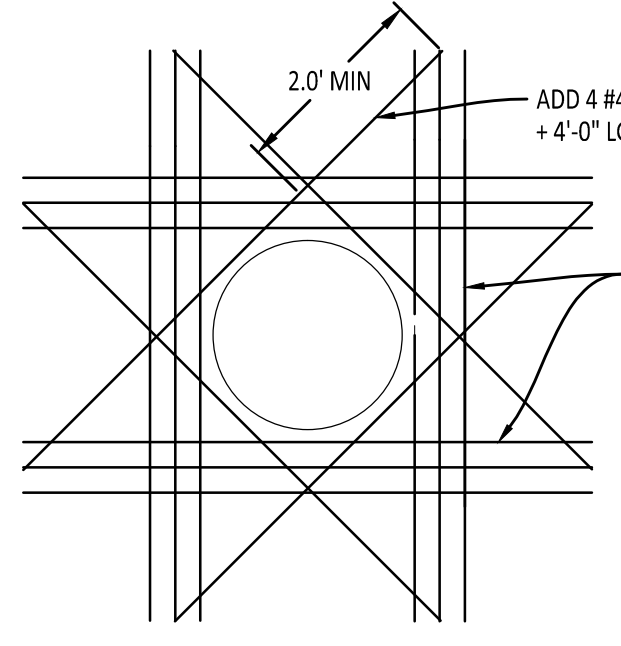


RETAINING WALL SECTION
N.T.S.

STEEL SCHEDULE											
"c"	"d"	"h"	"a"	"b"	V1 BARS		F1 BARS		H1	V2	F2
					Size	Spacing	Size	Spacing	Spacing	#4 BARS	No. Reqd.
8"	8"	1'-0"	8"	2'-0"	#4	12"	#4	18"	18"	18"	6
8"	8"	2'-0"	8"	2'-0"	#4	12"	#4	18"	18"	18"	6
8"	8"	3'-0"	8"	2'-0"	#4	12"	#4	18"	18"	18"	6
8"	8"	4'-0"	1'-2"	2'-6"	#4	12"	#4	12"	18"	18"	6
8"	8"	5'-0"	1'-8"	3'-0"	#4	9"	#4	9"	18"	18"	6
8"	8"	6'-0"	2'-2"	3'-6"	#4	6"	#4	6"	18"	18"	7



BENDING DIAGRAM		
BAR SIZE	K	PIN DIA.
#4	4 1/2"	2 1/2"



ADDED REINFORCEMENT AT ROUND
OPENING IN WALL OR SLAB
N.T.S.

- NOTES:
- CONSTRUCTION CONTROL JOINTS SHALL BE PLACED ON 20' TO 25' CENTERS USING 3/4" CHAMFER STRIPS. EXPANSION JOINTS SHALL BE PLACED ON 60' TO 75' CENTERS WITH 1/2" DOWEL, AND 1/2" PREMOLD EXPANSION JOINT FILLER.
 - WEEP HOLES SHALL HAVE GALVANIZED WIRE MESH SCREEN INSTALLED BETWEEN 4" WEEP HOLE TUBING AND GRAVEL AT FACE OF WALL. GRAVEL SHALL BE CONTINUOUS WITH LENGTH OF WALL SECTION.
 - RETAINING WALLS GREATER THAN 6'-0" HIGH REQUIRE INDIVIDUAL DESIGN.
 - DO NOT USE FOR ACCOMMODATING SURCHARGE LOADING.

RETAINING WALL NOTES
N.T.S.



VICINITY MAP
NOT TO SCALE

ENGINEER NOTES

- SITE INFORMATION**
LAND AREA - 0.39 ACRES
CURRENT ZONING - C1
EXISTING USE - VACANT
PROPOSED USE - MULTI-FAMILY

BUILDING AREA - 7,382 SQFT
BUILDING AREA COVERAGE - 43%

NO ONSITE PARKING SCHEDULE

IMPERVIOUS AREA - 0.22 ACRES

- ALL DIMENSIONS AND RADII ARE REFERENCED FROM THE BACK OF CURB. ALL RADII NOT LABELED SHALL HAVE A MINIMUM RADIUS OF 5 FEET.
- SITE WILL UTILIZE MULTIPLE DUMPSTERS AT THE LOCATIONS SHOWN ON PLANS. ALL DUMPSTER AREAS SHALL BE SCREENED ON AT LEAST THREE SIDES.

LANDSCAPING NOTES:

- AT LEAST ONE (1) TREE & THREE (3), FIVE (5) GALLON SHRUBS SHALL BE PROVIDED FOR EACH UNIT.

13 UNITS
13 UNITS* (1 TREE/1 UNIT) = 13 TREES REQUIRED
13 UNITS* (3 SHRUBS/1 UNIT) = 39 SHRUBS REQUIRED
- TREE PLANTING AREAS SHALL BE AT LEAST SEVEN (7) FEET WIDE AND PROTECTED BY RAISED CURBS TO PREVENT DAMAGE BY VEHICLES.
- ALL TREES SHALL BE OF ORNAMENTAL, EVERGREEN, OR OF THE LARGE DECIDUOUS TYPE.
- LARGE DECIDUOUS TREES SHALL HAVE A MINIMUM HEIGHT OF EIGHT (8) FEET, AND A MINIMUM DIAMETER OF THREE (3) INCHES, MEASURED AT A POINT THAT IS AT LEAST FOUR AND ONE-HALF (4.5) FEET ABOVE THE EXISTING GRADE LEVEL.
- ORNAMENTAL TREES SHALL HAVE A MINIMUM HEIGHT OF FOUR (4) FEET.
- CONIFERS OR UPRIGHT EVERGREEN TREES SHALL HAVE A MINIMUM HEIGHT, AFTER PLANTING, OF SIX (6) FEET.
- ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES IN A MANNER DESIGNED TO ENCOURAGE VIGOROUS GROWTH.
- THIS PLAN MAY BE MODIFIED BY THE OWNER OR HIS/HER DESIGNATED REPRESENTATIVE, AS LONG AS THE ABOVE CRITERIA ARE MET.

STANDARD ACCESSIBILITY REQUIREMENTS

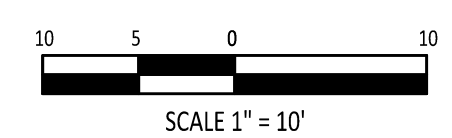
- HANDICAP ACCESSIBLE SPACES AND ACCESS AISLES SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS.
- ALL ACCESSIBLE PARKING SPACE SHALL HAVE A VERTICALLY MOUNTED SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. AT LEAST ONE SPACE MUST HAVE AN ADDITIONAL SIGN "VAN ACCESSIBLE" MOUNTED BELOW THE SIGN OF ACCESSIBILITY. SIGNS SHALL BE LOCATED 60 INCHES MINIMUM ABOVE THE ADJACENT PAVED SURFACE TO THE BOTTOM OF TEXT.
- ACCESS AISLES SERVING ACCESSIBLE PARKING SPACES SHALL BE 60 INCHES MINIMUM. ALL VAN ACCESSIBLE SPACES SHALL HAVE ACCESS AISLES THAT ARE 96 INCHES MINIMUM.
- HANDICAP ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM CROSS-SLOPE OF 2% AND A MAXIMUM RUNNING SLOPE OF 5%.
- RAMPS EXCEEDING 6 INCHES IN RISE (EXCLUDING CURB RAMPS) SHALL HAVE HANDRAILS ON EACH SIDE BETWEEN 34 INCHES AND 36 INCHES IN HEIGHT, AND EXTEND 12 INCHES BEYOND THE TOP AND BOTTOM OF THE RAMP. HANDRAILS SHALL NOT DIMINISH THE CLEAR AREA REQUIRED FOR TOP AND BOTTOM LANDINGS SERVICING THE RAMPS.
- BOTTOM LANDINGS FOR RAMPS SERVING REQUIRED EXITS SHALL BE 5 FT X 5 FT MINIMUM.
- SIDEWALKS MUST BE AT LEAST 36 INCHES WIDE.
- RAMPS SHALL NOT EXCEED A 1:12 SLOPE.

VERTICAL AND HORIZONTAL CONTROL

- THE SITE VERTICAL BENCHMARK IS A CUT SQUARE ON THE EAST SIDE OF A CONCRETE LIGHT POLE BASE AS SHOWN ON PLANS. ELEV = 323.20'

VERTICAL CONTROL - NAVD 88
- HORIZONTAL CONTROL POINT A
N- 551646.92 E- 1696793.92
HORIZONTAL CONTROL POINT B
N- 551448.53 E- 1696797.69

HORIZONTAL CONTROL - AR STATE PLANE GRID NORTH ZONE-NAD 83

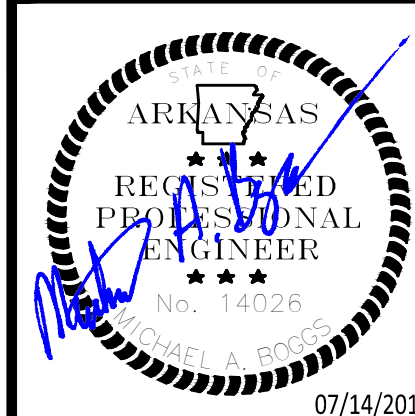
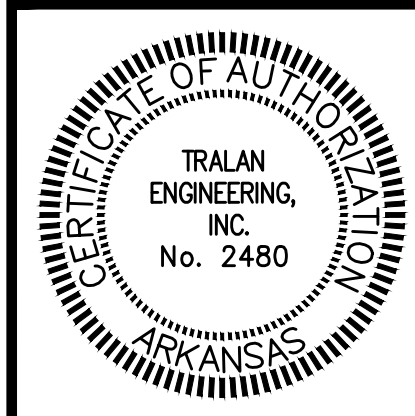


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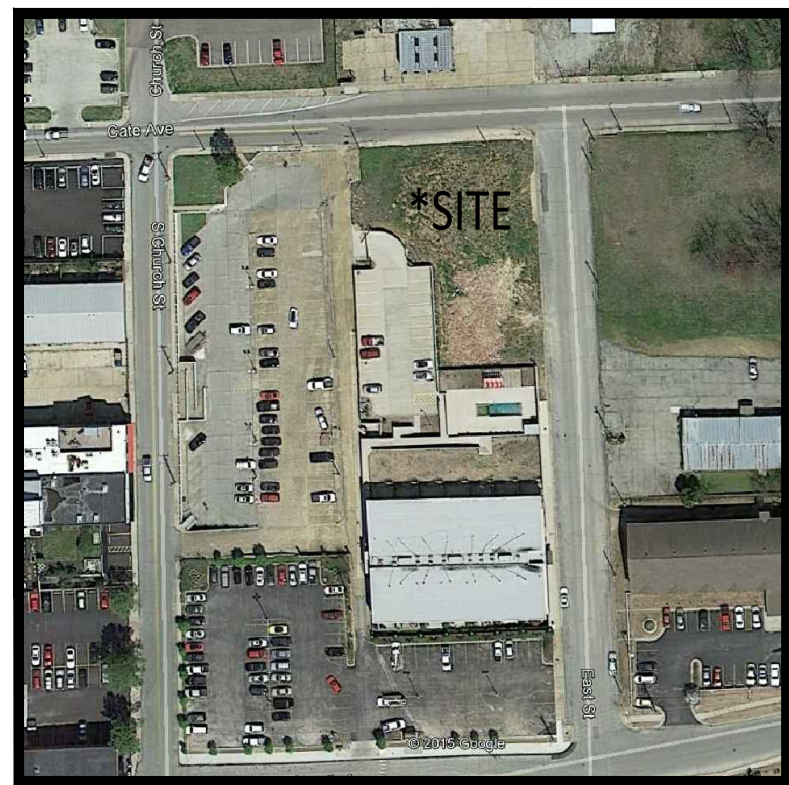
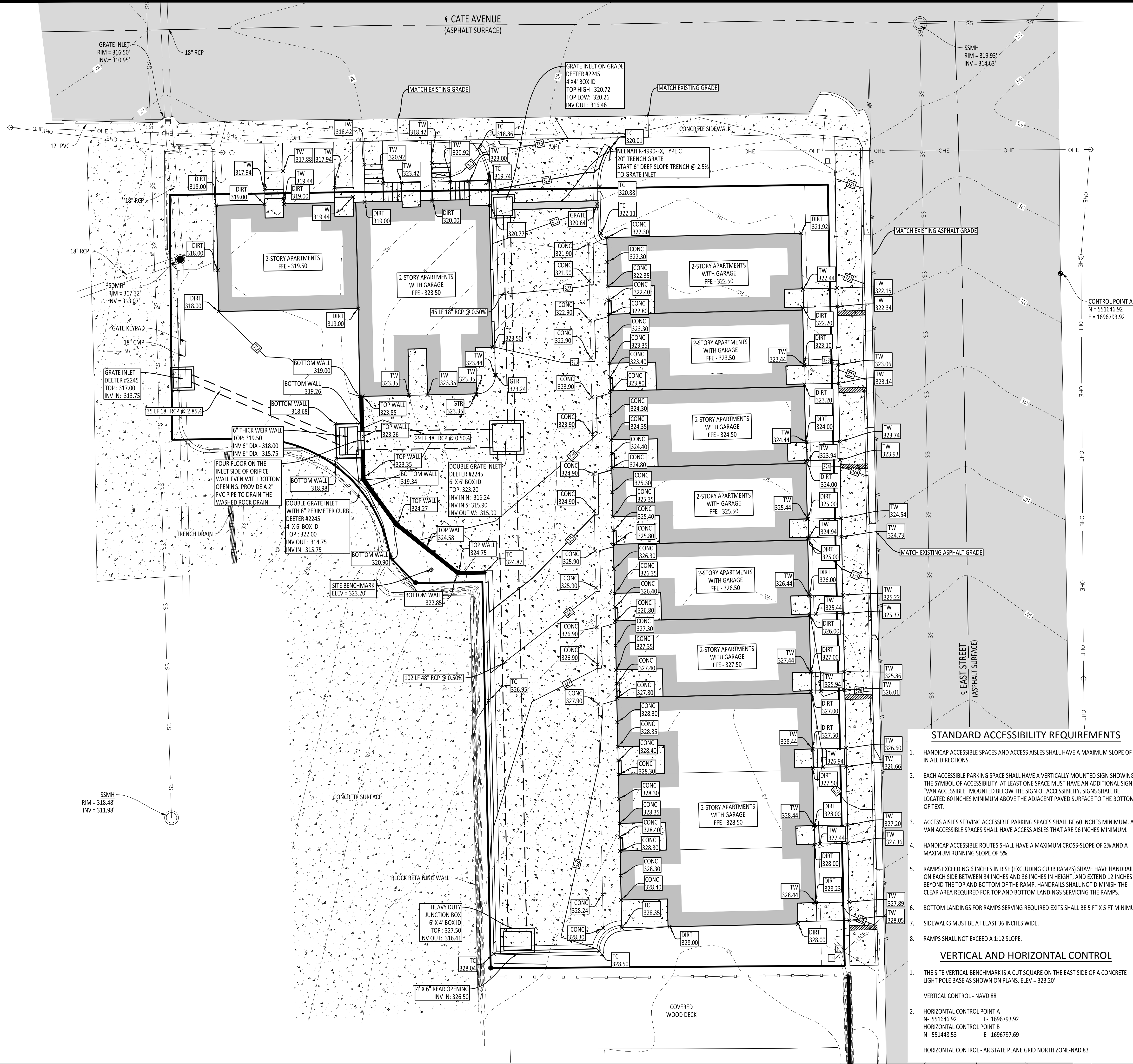


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SITE DIMENSION
PLAN

SHEET NUMBER:
4 of 7



VICINITY MAP
NOT TO SCALE

ENGINEER NOTES:

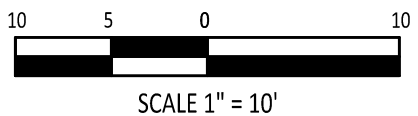
- ALL SUBGRADE STRUCTURAL FILL SHALL BE PLACED IN UNIFORM HORIZONTAL LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS AND COMPACTED WITH SUITABLE EQUIPMENT TO ACHIEVE 95% STANDARD PROCTOR (ASTM D698) AT 2% BELOW TO 3% ABOVE OPTIMUM MOISTURE CONTENT. STRUCTURAL FILL MATERIALS SHALL HAVE A PLASTICITY INDEX BETWEEN 5 AND 25 AND A LIQUID LIMIT NOT EXCEEDING 50. ALL FILL MATERIAL SHALL BE LESS THAN 3" IN DIAMETER.
- ALL BASE MATERIAL SHALL BE COMPACTED TO 98% MODIFIED PROCTOR (ASTM D1557).
- ASPHALT SURFACE COURSE MATERIALS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AHTD STANDARD SPECIFICATIONS. ALL PARKING LOTS SHALL BE CONSTRUCTED UTILIZING THE 3/8" ASPHALT CONCRETE HOT MIX SURFACE COURSE DESIGN REQUIREMENTS AS SHOWN IN SECTION 407.
- ASPHALT CONCRETE PAVEMENTS SHALL NOT BE APPLIED WHEN THE SURFACE TEMPERATURE IS BELOW 40 DEGREES (F), WHEN THERE IS FROST IN THE BASE MATERIAL, OR ANY OTHER TIME WHEN WEATHER CONDITIONS ARE UNSUITABLE.
- ALL CONCRETE CURB AND GUTTER SECTIONS SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI. ALL SIDEWALK, DRIVING, PARKING, AND DUMPSTER AREAS SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 PSI AND REINFORCED WITH MASTERFIBER MAC 2200 CB AT AN APPLICATION RATE OF 3 LB/CU. YD. AN EQUIVALENT REINFORCEMENT PRODUCT MAY BE USED, BUT MUST BE APPROVED BY DESIGN ENGINEER. THE TOTAL TARGETED AIR CONTENT OF ALL CONCRETE SHALL BE 5% (PLUS OR MINUS 1%) AS DETERMINED BY ASTM C173/C173M. MAXIMUM SLUMP SHALL BE 5 INCHES AS DETERMINED BY ASTM C143.
- THE MAXIMUM CONTRACTION JOINT SPACING OF ANY CONCRETE PANEL SHALL BE 30 TIMES THE THICKNESS OF THE SLAB. IN NO CASE SHALL THE SPACING EXCEED 15 FEET. JOINT PATTERNS SHOULD DIVIDE ALL PAVEMENT SECTIONS INTO APPROXIMATELY SQUARE PANELS. THE LENGTH OF ANY PANEL SHALL NEVER BE MORE THAN 25% GREATER THAN ITS WIDTH. ALL JOINTS SHALL BE CONSTRUCTED TO A MINIMUM DEPTH OF 1/3 THE THICKNESS OF THE SLAB.
- ALL CURB AND GUTTER SECTIONS SHALL HAVE CONTRACTION JOINTS CONSTRUCTED AT A MAXIMUM SPACING OF 15 FT.
- ISOLATION (EXPANSION) JOINTS ARE REQUIRED WHERE CURB AND PAVEMENTS ABUT BUILDINGS, FOUNDATIONS, EXISTING PAVEMENTS, MANHOLES AND OTHER FIXED OBJECTS.
- ALL CONCRETE ISOLATION JOINTS SHALL BE SEALED IN ACCORDANCE WITH ACI 504R.
- A WHITE-PIGMENTED MEMBRANE-FORMING CURING COMPOUND MEETING ASTM C309, TYPE II, CLASS A REQUIREMENTS SHALL BE APPLIED ON ALL CONCRETE SURFACES. THE APPLICATION RATE SPECIFIED BY THE MANUFACTURER SHALL BE USED UNLESS SITE CONDITIONS WARRANT EXTRA COVERAGE. A SECOND APPLICATION AT A 90 DEGREE OFFSET IS RECOMMENDED ON WINDY DAYS OR WHENEVER A SINGLE APPLICATION RESULTS IN COVERAGE THAT IS NOT UNIFORM. THE MINIMUM APPLICATION RATE SHALL NEVER BE LESS THAN 200 SQ. FT./GAL.
- HOT AND COLD WEATHER WARRANT SPECIAL PRECAUTIONS WHEN PLACING, FINISHING, AND PROTECTING CONCRETE AGAINST THE EFFECTS OF WEATHER. DURING HOT WEATHER THE CONTRACTOR MUST COMPLY WITH ACI 305.1 AND DURING COLD WEATHER ACI 306.1.
- ALL DRAINAGE PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP), UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE GRADES SHOWN ON THIS PLAN. ALL COMBINATION CURB AND GUTTER SECTIONS SHALL HAVE THE GUTTER PORTION PITCHED IN THE SAME DIRECTION OF THE INTENDED FLOW.
- CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IN CONFORMANCE WITH THE GRADES AND SLOPES SHOWN HEREON THROUGHOUT ALL SITE GRADING AND EXCAVATING ACTIVITIES.
- CONTRACTOR SHALL KEEP AN ORDERLY WORK SITE AND SHALL DISPOSE OF ALL CONSTRUCTION DEBRIS IN ACCORDANCE WITH ALL LOCAL, STATE, OR FEDERAL REGULATIONS.
- THE LOCATIONS AND SIZES OF EXISTING UNDERGROUND UTILITIES SHOWN ARE BASED FIELD MEASUREMENTS AND EXISTING UTILITY MAPS. TRALAN ENGINEERING, INC. MAKES NO GUARANTEE TO THE EXACT LOCATION OF THE UTILITIES SHOWN ON THESE PLANS. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM LOCATIONS SHOWN. NO EXCAVATIONS WERE MADE TO LOCATE BURIED UTILITIES OR STRUCTURES.
- BEFORE ANY EXCAVATIONS ARE MADE, THE CONTRACTOR SHALL CONTACT THE ARKANSAS ONE-CALL AT 811 AT LEAST TWO DAYS PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION ACTIVITY.
- CONTRACTOR SHALL NOT CONSTRUCT A DRIVEWAY OF ANY TYPE UNTIL THE OWNER HAS SECURED A DRIVEWAY ACCESS PERMIT FROM THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT (AHTD) OR THE LOCAL MUNICIPALITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TAKEOUT. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS, ELEVATIONS, STATIONS, ETC. BEFORE ORDERING MATERIALS OR PROCEEDING WITH WORK, AND IS RESPONSIBLE FOR SAME. IF ANY DISCREPANCY IN THE PLANS OR SPECIFICATIONS ARISES, THE CONTRACTOR SHALL CONTACT THE ENGINEER BEFORE INITIATING WORK AFFECTED BY THE DISCREPANCY.
- THE CONTRACTOR IS CAUTIONED AND SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER'S REPRESENTATIVE OF ANY ERROR OR OMISSION ON THESE PLANS WHICH MAY CREATE ADDITIONAL WORK OR EXPENSE BY THE CONTRACTOR, AND SHALL OBTAIN A WRITTEN WORK ORDER FROM THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH ANY EXTRA WORK WHICH MAY BE CAUSED FROM SUCH ERROR OR OMISSION ON THESE PLANS.

STANDARD ACCESSIBILITY REQUIREMENTS

- HANDICAP ACCESSIBLE SPACES AND ACCESS AISLES SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS.
- EACH ACCESSIBLE PARKING SPACE SHALL HAVE A VERTICALLY MOUNTED SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. AT LEAST ONE SPACE MUST HAVE AN ADDITIONAL SIGN "VAN ACCESSIBLE" MOUNTED BELOW THE SIGN OF ACCESSIBILITY. SIGNS SHALL BE LOCATED 60 INCHES MINIMUM ABOVE THE ADJACENT PAVED SURFACE TO THE BOTTOM OF TEXT.
- ACCESS AISLES SERVING ACCESSIBLE PARKING SPACES SHALL BE 60 INCHES MINIMUM. ALL VAN ACCESSIBLE SPACES SHALL HAVE ACCESS AISLES THAT ARE 96 INCHES MINIMUM.
- HANDICAP ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM CROSS-SLOPE OF 2% AND A MAXIMUM RUNNING SLOPE OF 5%.
- RAMPS EXCEEDING 6 INCHES IN RISE (EXCLUDING CURB RAMPS) SHALL HAVE HANDRAILS ON EACH SIDE BETWEEN 34 INCHES AND 36 INCHES IN HEIGHT, AND EXTEND 12 INCHES BEYOND THE TOP AND BOTTOM OF THE RAMP. HANDRAILS SHALL NOT DIMINISH THE CLEAR AREA REQUIRED FOR TOP AND BOTTOM LANDINGS SERVING THE RAMPS.
- BOTTOM LANDINGS FOR RAMPS SERVING REQUIRED EXITS SHALL BE 5 FT X 5 FT MINIMUM.
- SIDEWALKS MUST BE AT LEAST 36 INCHES WIDE.
- RAMPS SHALL NOT EXCEED A 1:12 SLOPE.

VERTICAL AND HORIZONTAL CONTROL

- THE SITE VERTICAL BENCHMARK IS A CUT SQUARE ON THE EAST SIDE OF A CONCRETE LIGHT POLE BASE AS SHOWN ON PLANS. ELEV = 323.20'
VERTICAL CONTROL - NAVD 88
- HORIZONTAL CONTROL POINT A
N= 551646.92
E= 1696797.69
HORIZONTAL CONTROL POINT B
N= 551448.53
E= 1696797.69
HORIZONTAL CONTROL - AR STATE PLANE GRID NORTH ZONE-NAD 83

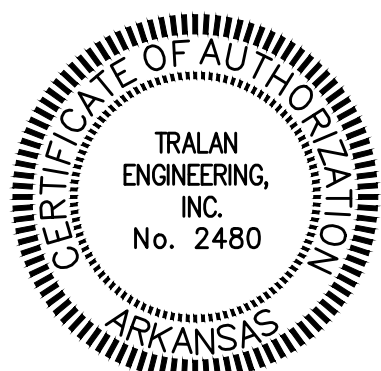


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PROJECT:
EAST STREET TOWNHOMES

CLIENT:
MATH INVESTMENTS, LLC

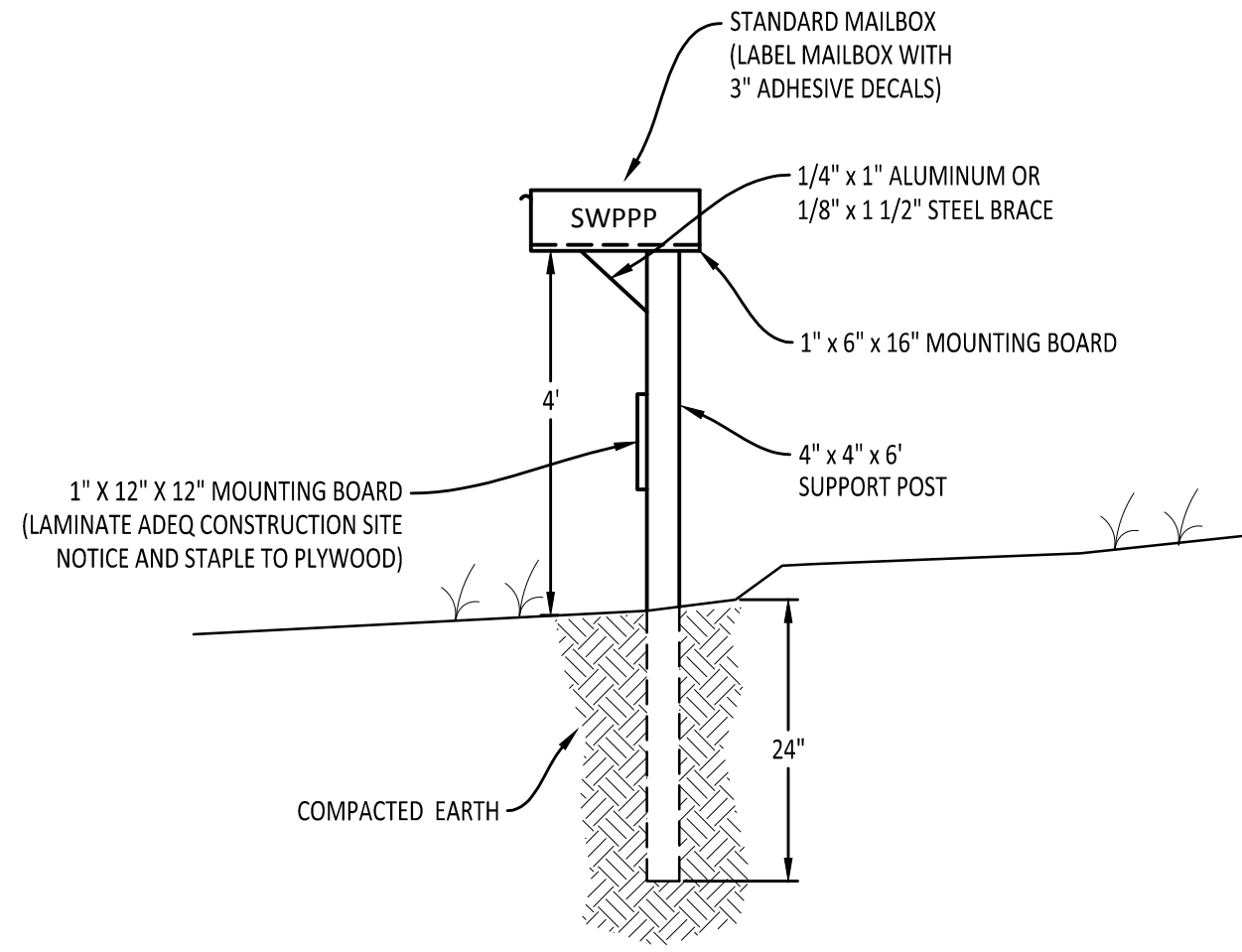


REVISIONS		
DATE	BY	DESCRIPTION

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DRAWN BY:	MAB
DATE:	07/14/2016
SCALE:	1" = 10'
JOB NO.:	16-022
CAD NO.:	

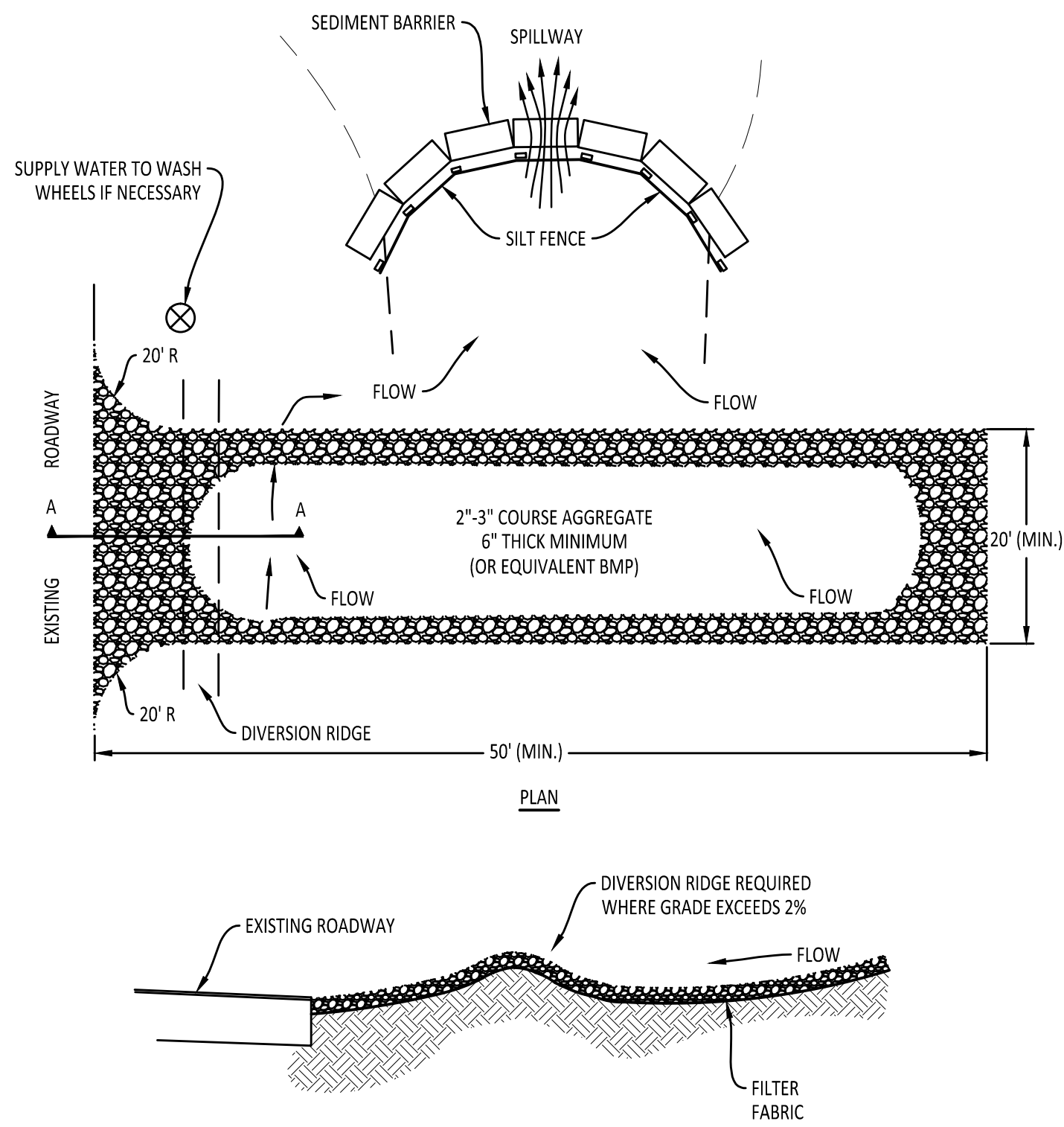
GRADING & DRAINAGE
PLAN

SHEET NUMBER:
5 of **7**



SWPPP MAILBOX

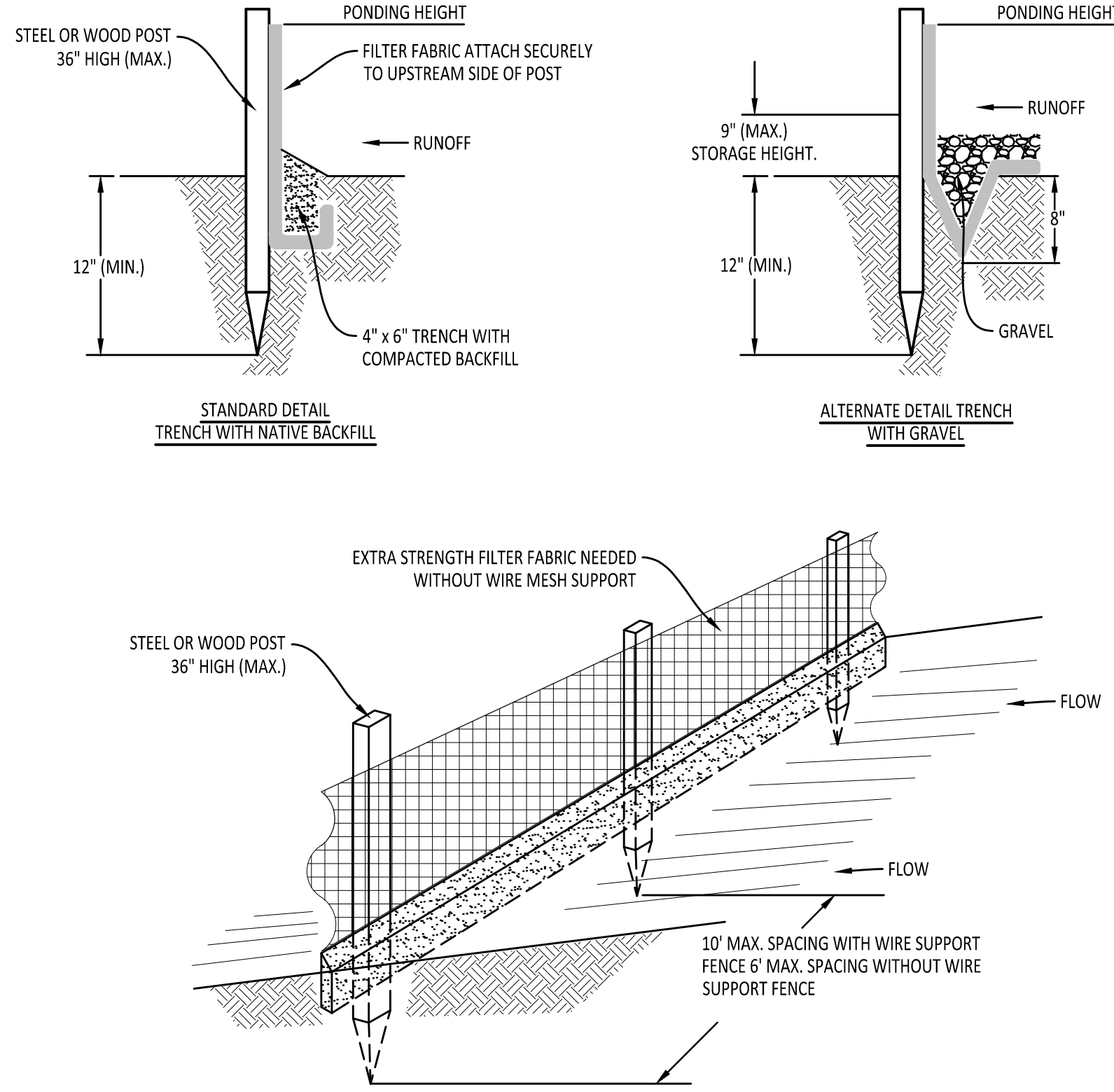
1



- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 4. USE SANDBAGS, STRAW BALES OR OTHER APPROVED METHODS TO CHANNEL RUNOFF TO BASIN AS REQUIRED. WHEN STRAW BALES ARE USED IN THIS APPLICATION A SILT FENCE IS TO BE INCLUDED AS SHOWN ON THE UPSTREAM SIDE OF THE SEDIMENT BARRIER.

CONSTRUCTION EXIT
W/ DIVERSION BERM

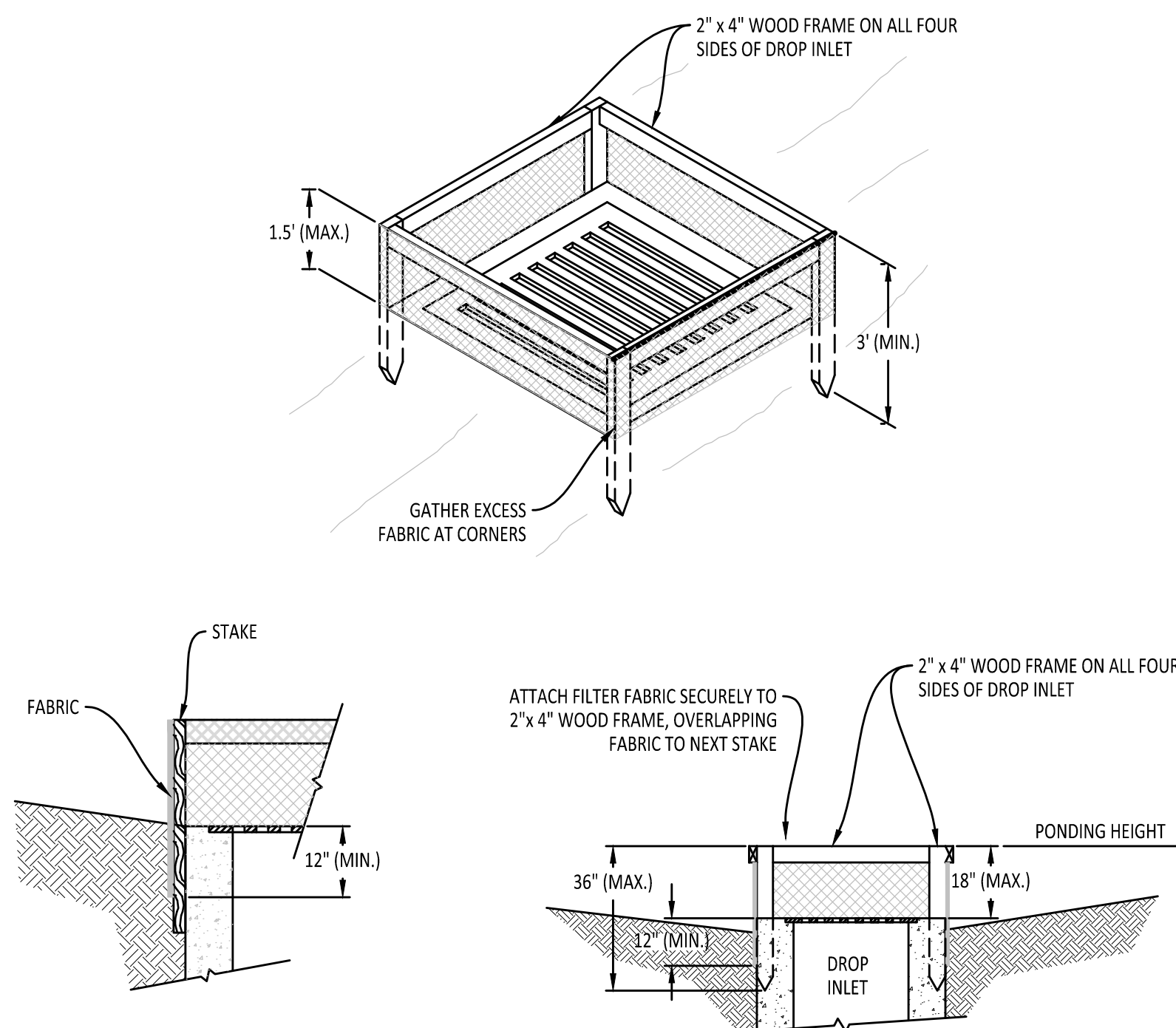
2



- NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
 2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
 3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE

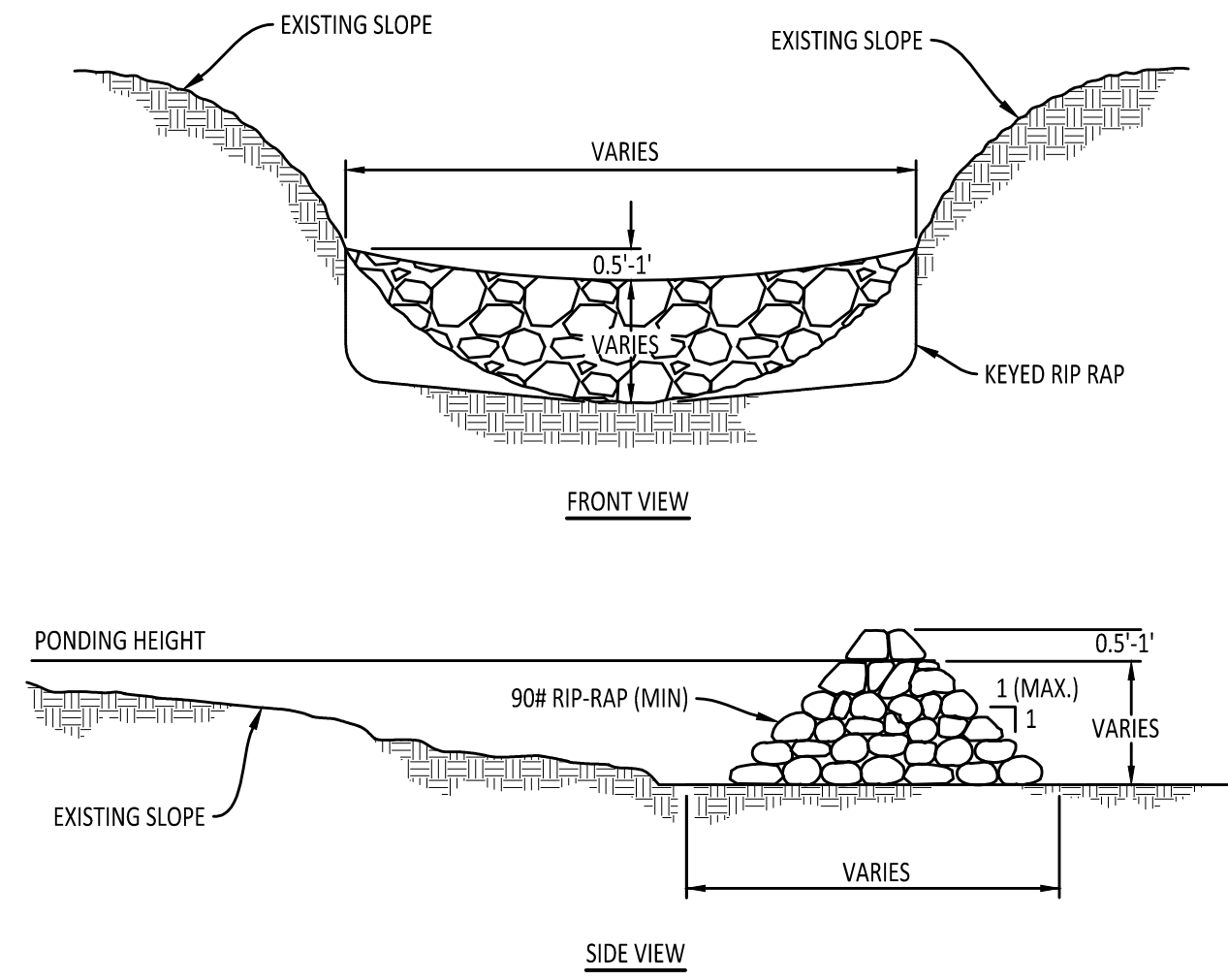
3



- NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
 2. USE 2"x 4" WOOD OR EQUIVALENT METAL STAKES. (3 FT. MIN. LENGTH)
 3. INSTALL 2"x 4" WOOD TOP FRAME TO INSURE STABILITY.
 4. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

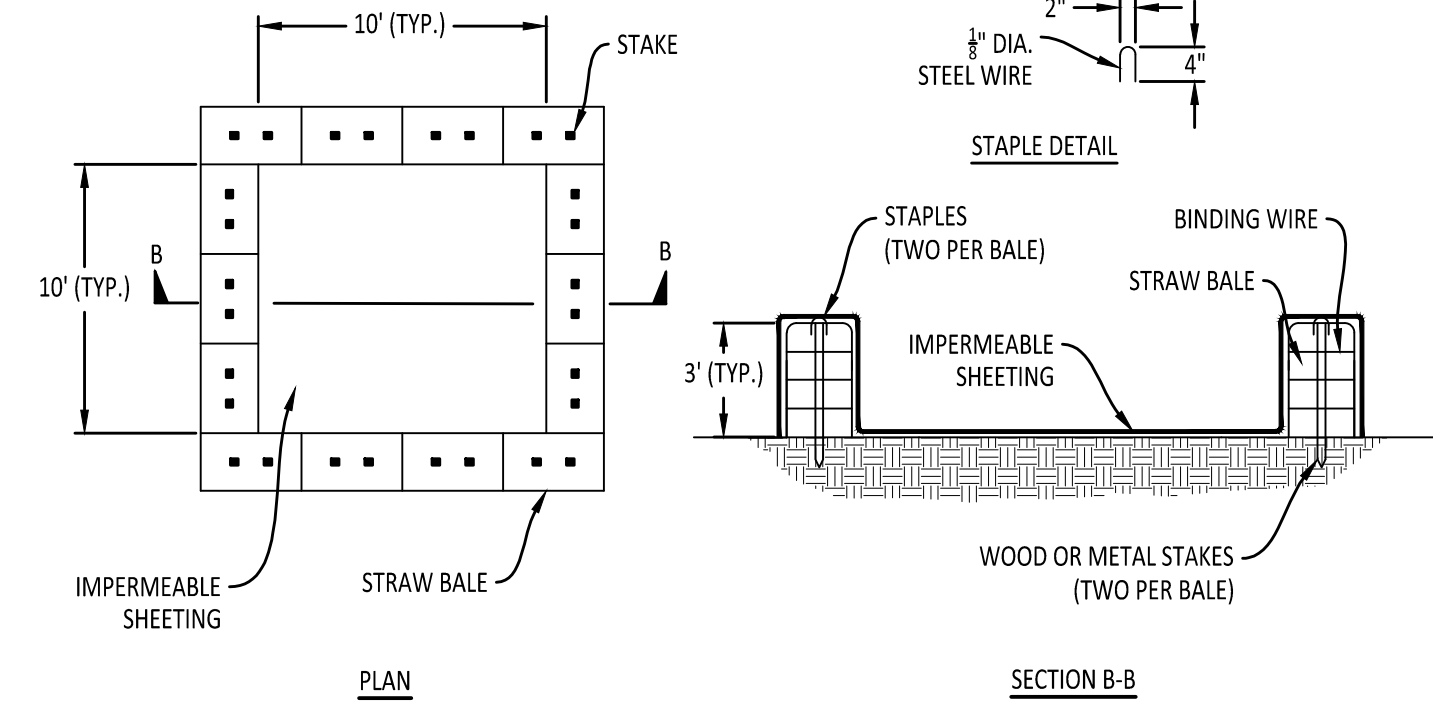
SEDIMENT BARRIER AT DROP INLET

4



RIP RAP CHECK DAM

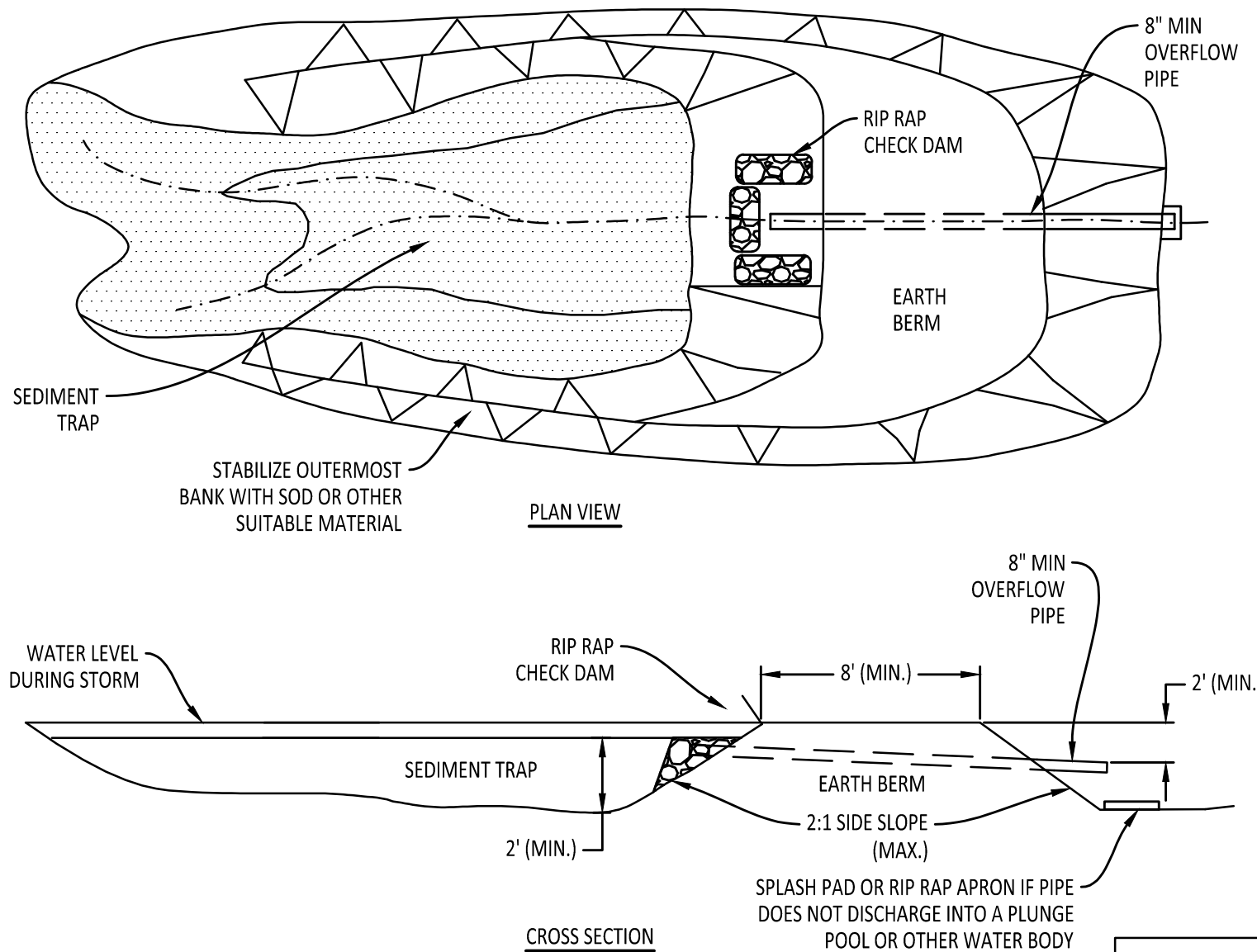
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- NOTES:
1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
 2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
 3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
 4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
 5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

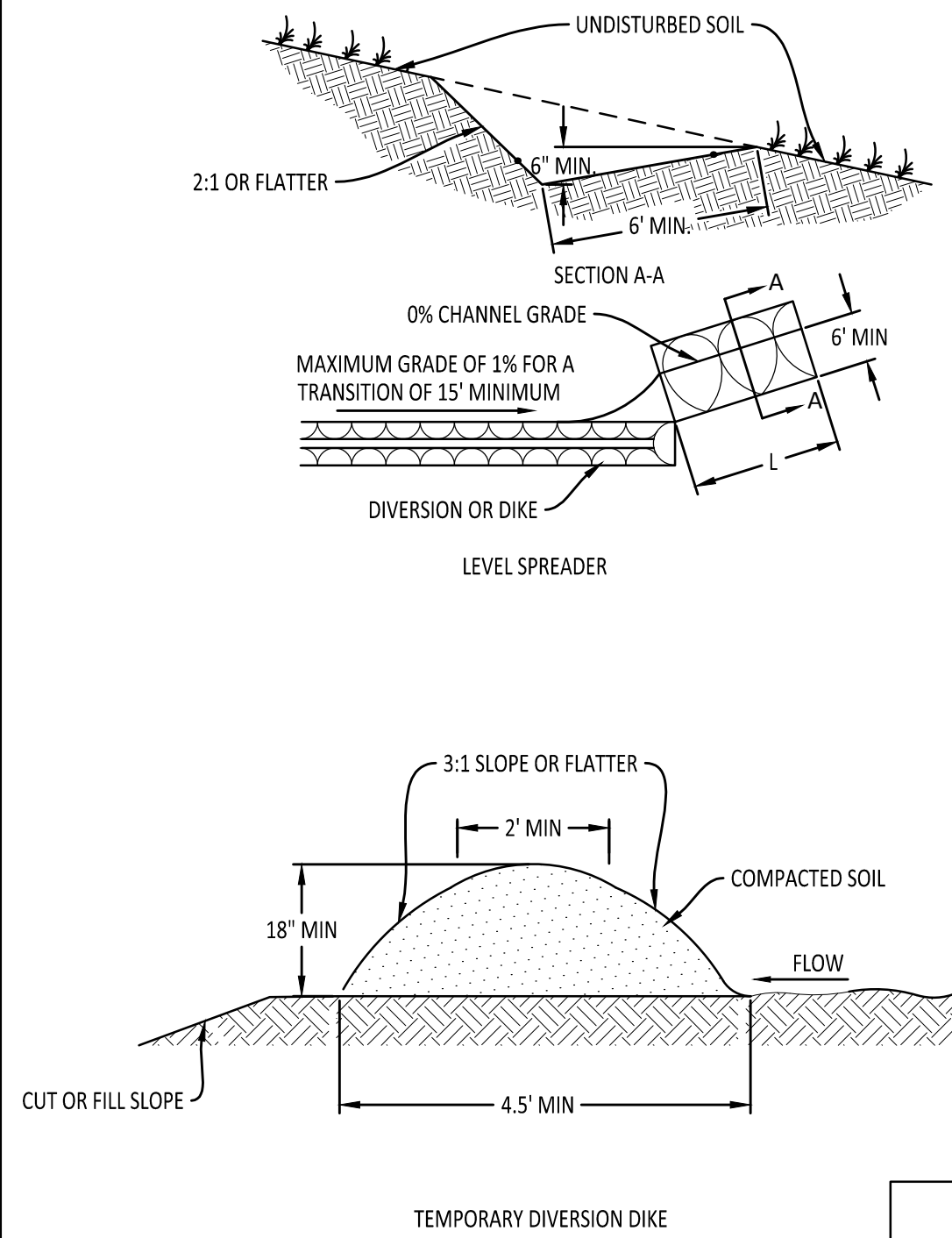
CONCRETE WASHOUT

6



EROSION CONTROL SEDIMENT BASIN

7



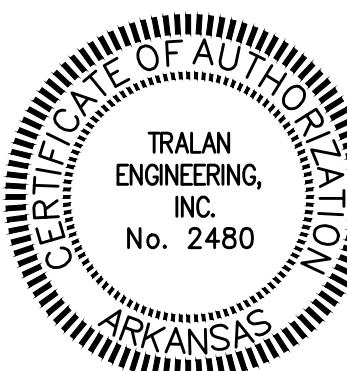
- INSTALLATION PROCEDURES
1. EXCAVATE THE TRENCH
 2. PLACE AND STAKE STRAW BALES
 3. BACKFILL AND COMPACT THE EXCAVATED SOIL
- BALES MUST BE TIGHTLY ABUTTING WITH NO GAPS
- ANGLE FIRST STAKE TOWARD PREVIOUSLY LAID BALE
- WEDGE LOOSE STRAW BETWEEN BALES
- 1" x 2" STAKE
- BINDING WIRE OR TWINE
- FILTERED RUN-OFF
- COMPACTED SOIL TO PREVENT PIPING
- SEDIMENT LADEN RUN-OFF

STRAW BALE BARRIER

9

PROJECT:
EAST STREET TOWNHOMES

CLIENT:
MATH INVESTMENTS, LLC



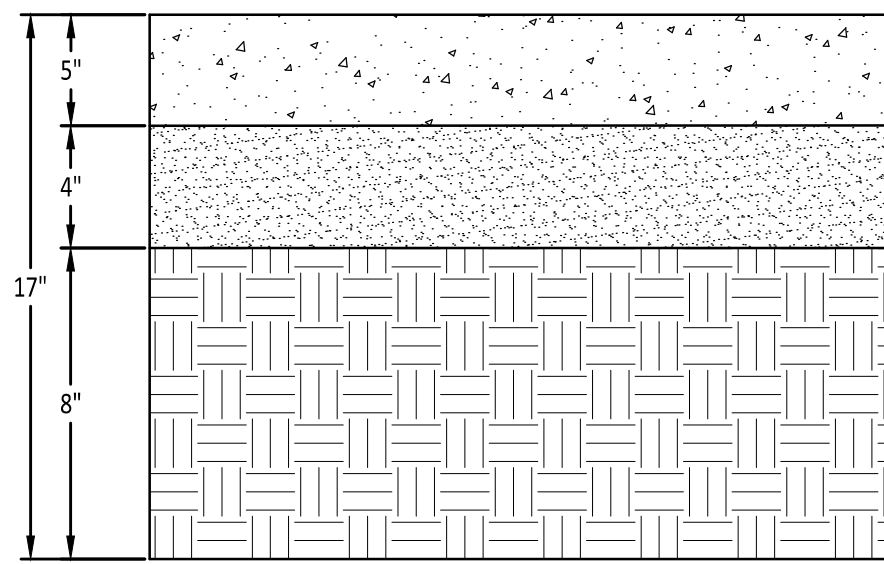
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SWPPP
DETAILS

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6 of **7**

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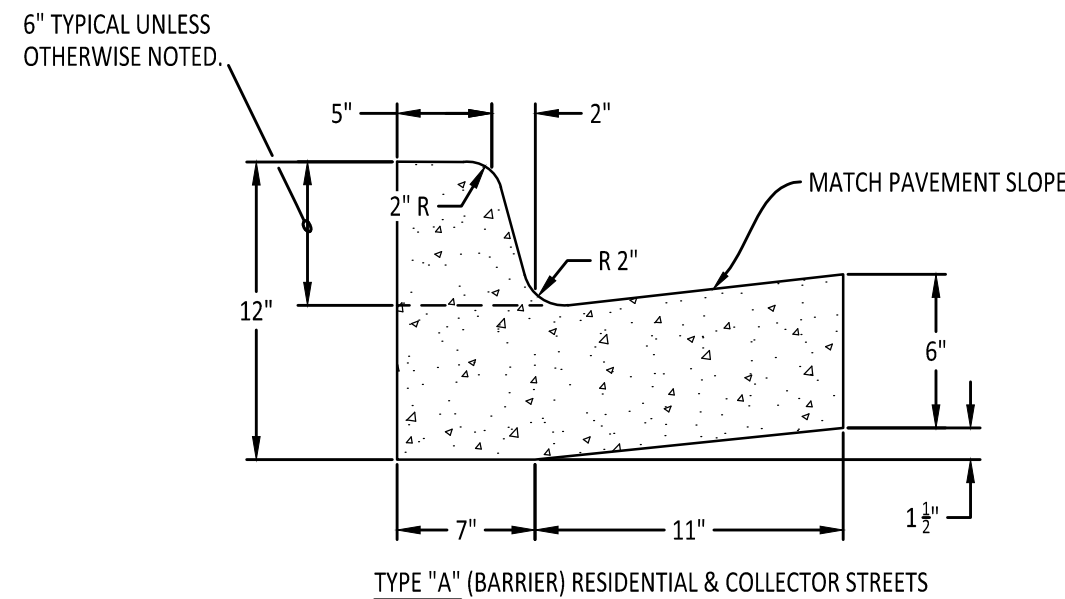


CONCRETE PAVING SECTION

N.T.S.

NOTE:
CONSTRUCT CONTRACTION JOINTS ON A MAXIMUM OF 15' CENTERS EACH WAY.
PROVIDE EXPANSION JOINTS WHERE PAVEMENT ABUTTS CURB AND SIDEWALKS.

1

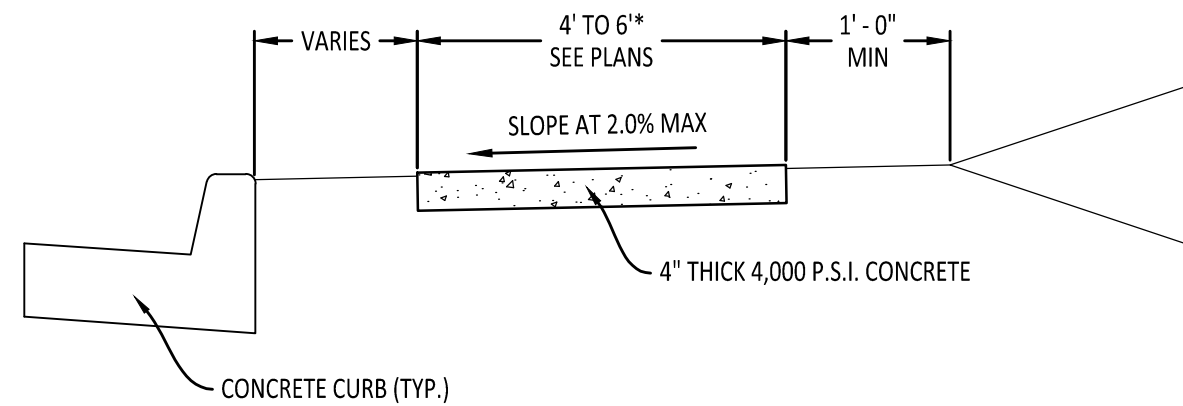


COMBINATION CURB AND GUTTER

N.T.S.

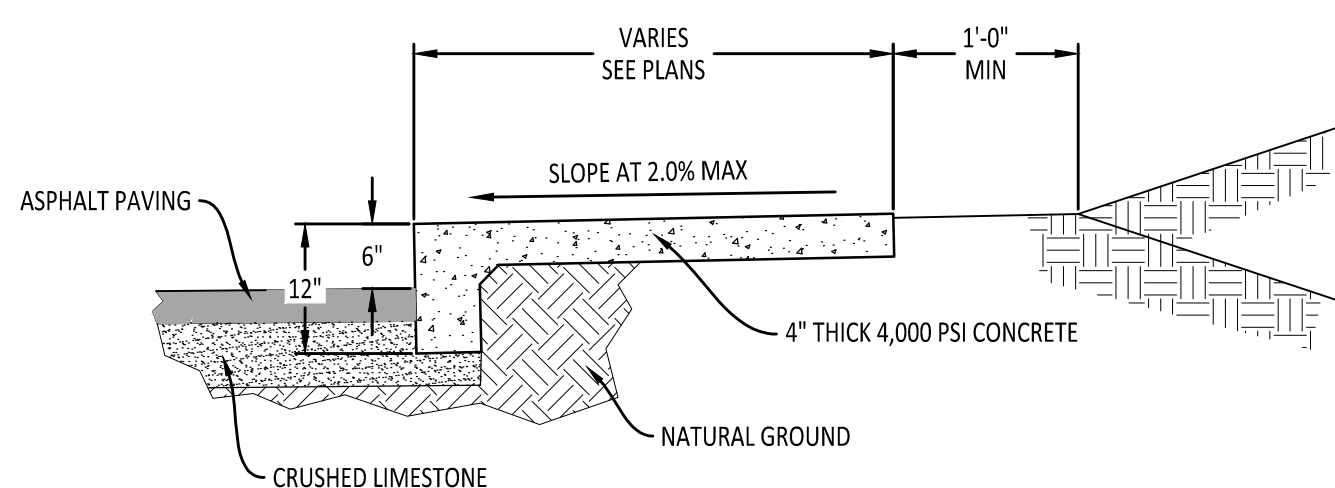
NOTE:
CONTRACTION JOINTS SHALL BE CONSTRUCTED EVERY FIFTEEN FEET.
EXPANSION JOINTS SHALL BE CONSTRUCTED AT FIXED STRUCTURAL OBJECTS, SUCH AS DRAINAGE INLETS AND SIDEWALKS.

2



TYPICAL SIDEWALK SECTION

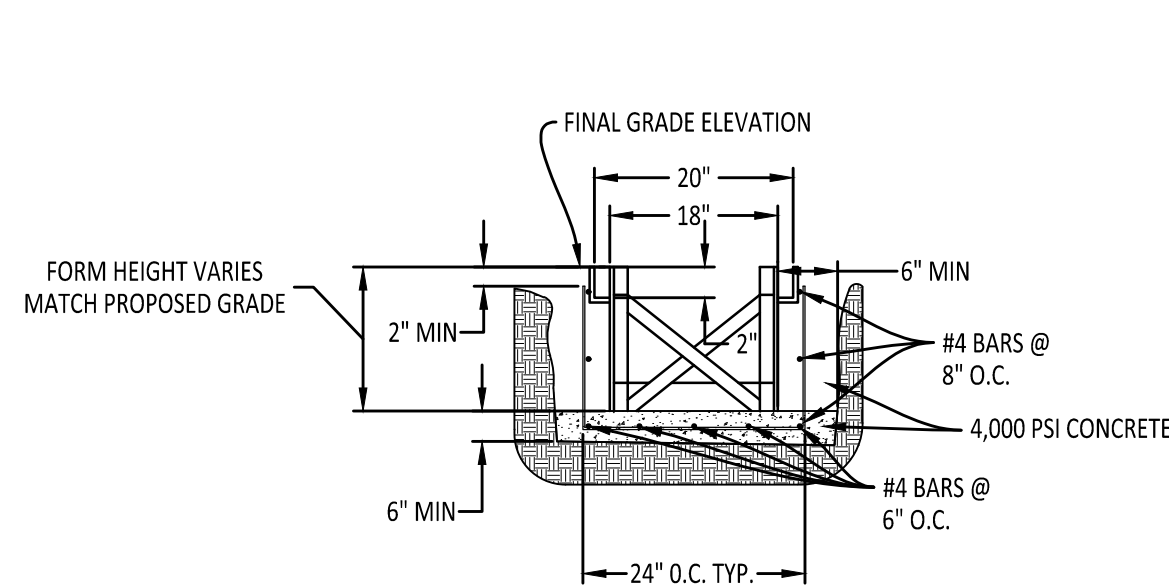
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SIDEWALK AT ASPHALT PAVING

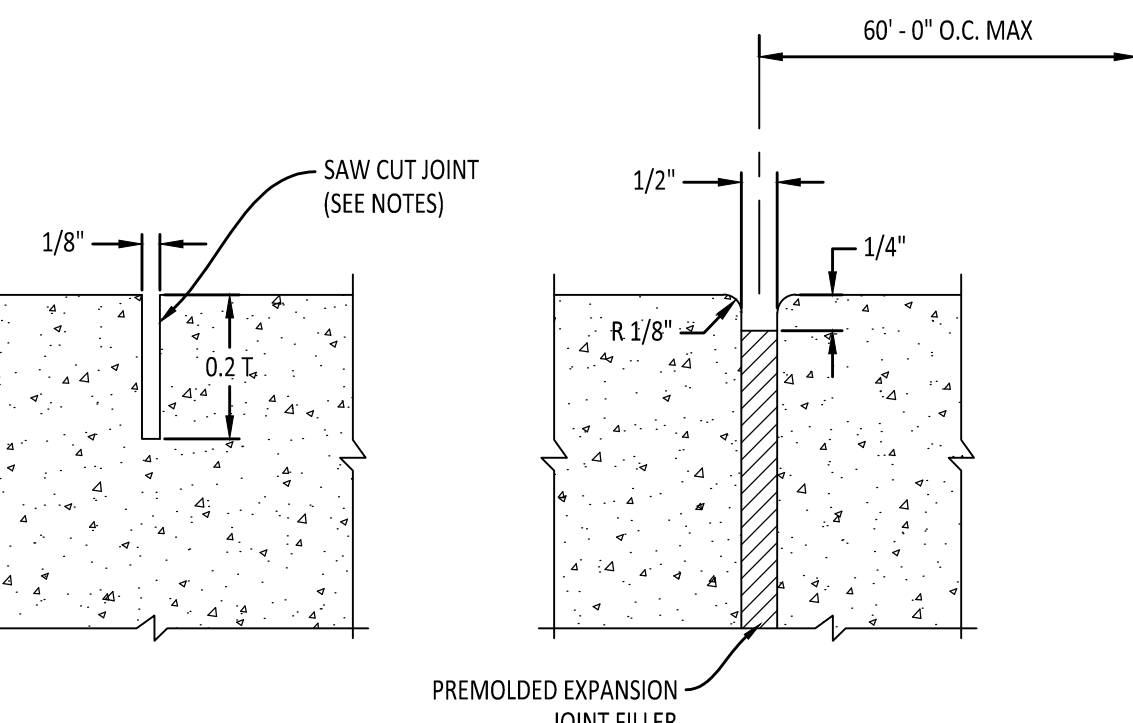
N.T.S.

3



TRENCH BOX DETAIL

N.T.S.



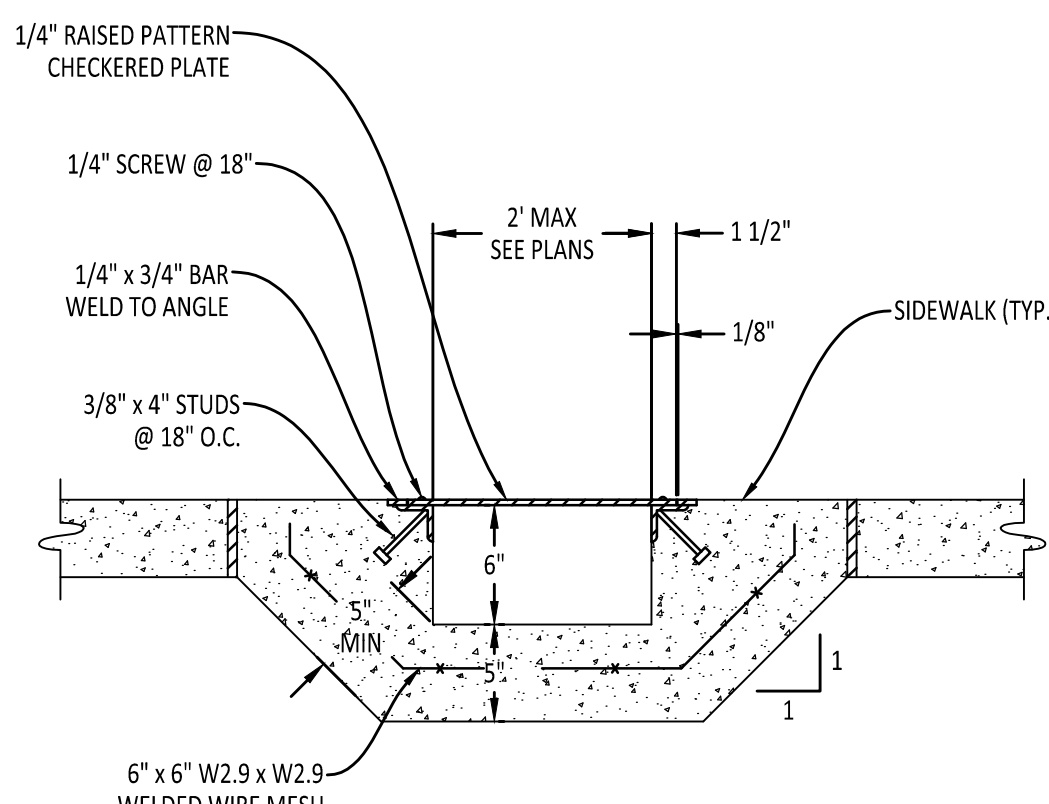
CONSTRUCTION JOINT DETAILS

N.T.S.

NOTE:

1. PROVIDE EXPANSION JOINT WHERE CONCRETE ABUTTS EXISTING CONCRETE, SUCH AS CURB AND NEXT TO STRUCTURES AND DRIVEWAYS.
2. JOINT SPACING ON CURBS TO BE MAXIMUM 15'.
3. JOINT SPACING ON SIDEWALKS TO BE EQUAL TO THE SIDEWALK WIDTH.

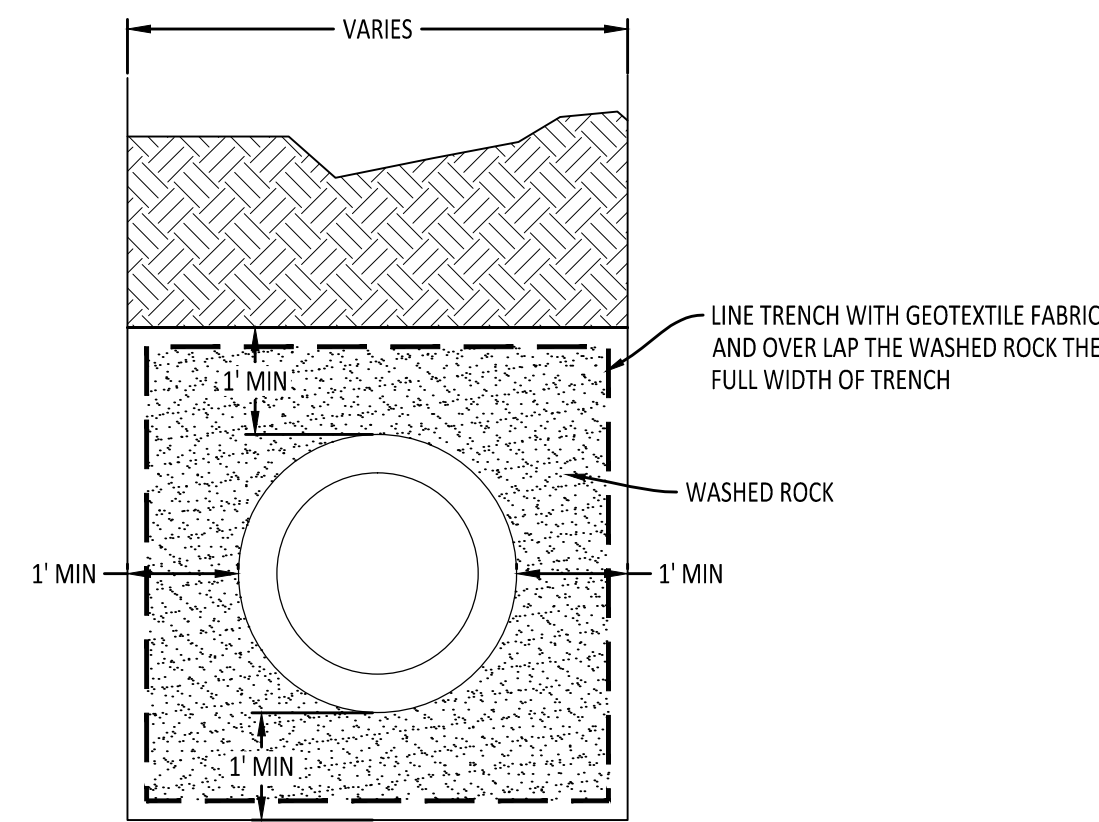
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SIDEWALK DRAIN DETAIL

N.T.S.

6

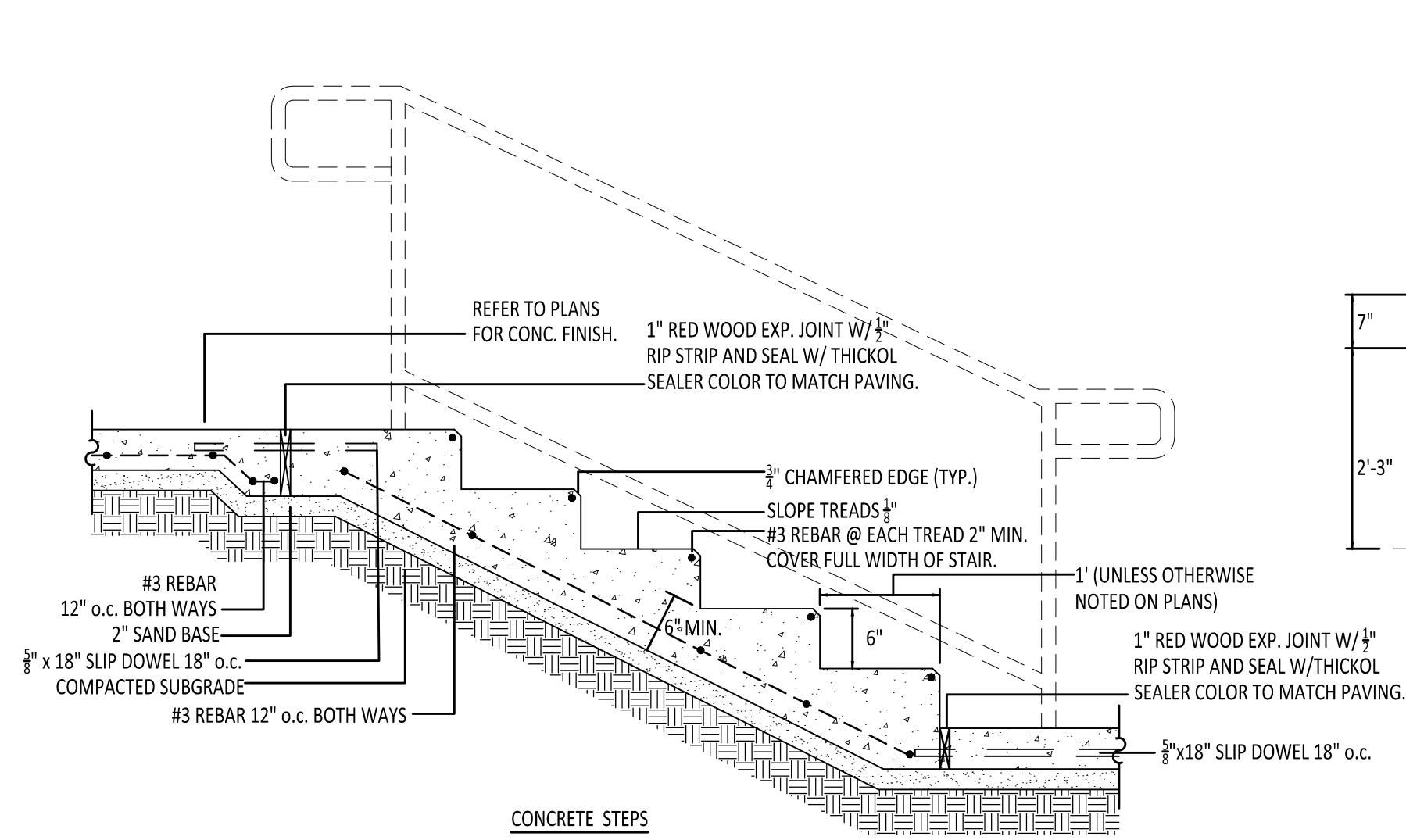


WASHED ROCK DRAIN

N.T.S.

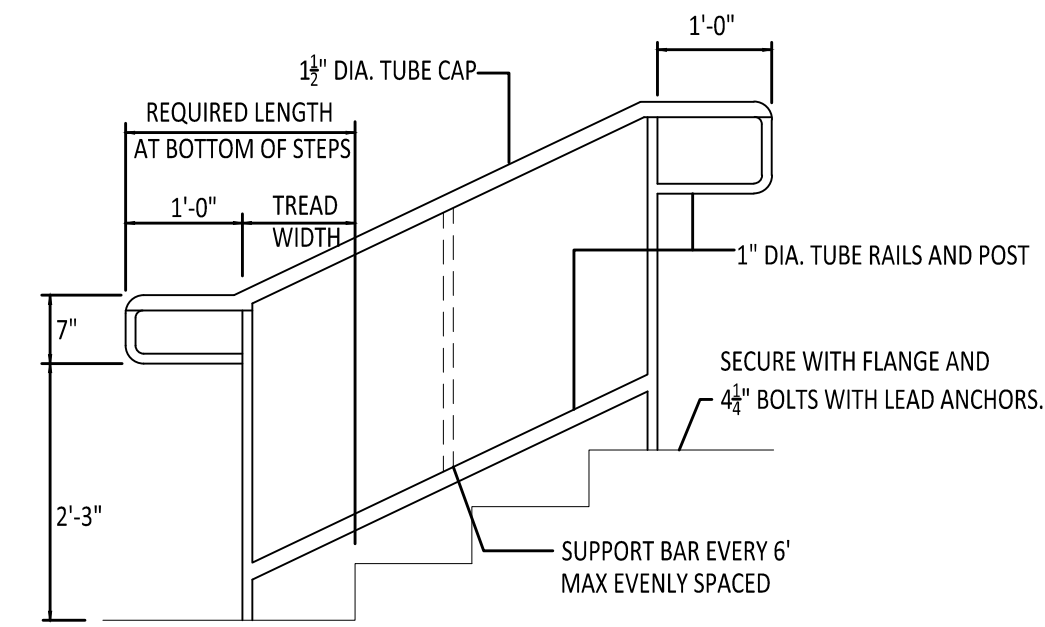
- NOTE:
1. BED ALL UNDERGROUND STORAGE PIPE.
 2. PROVIDE AN 2" PVC OUTLET DRAIN IN THE LOWEST DRAINAGE BOX OF THE STORAGE SYSTEM TO DRAIN WASHED ROCK.

7



STAIRS AND HANDRAIL DETAIL

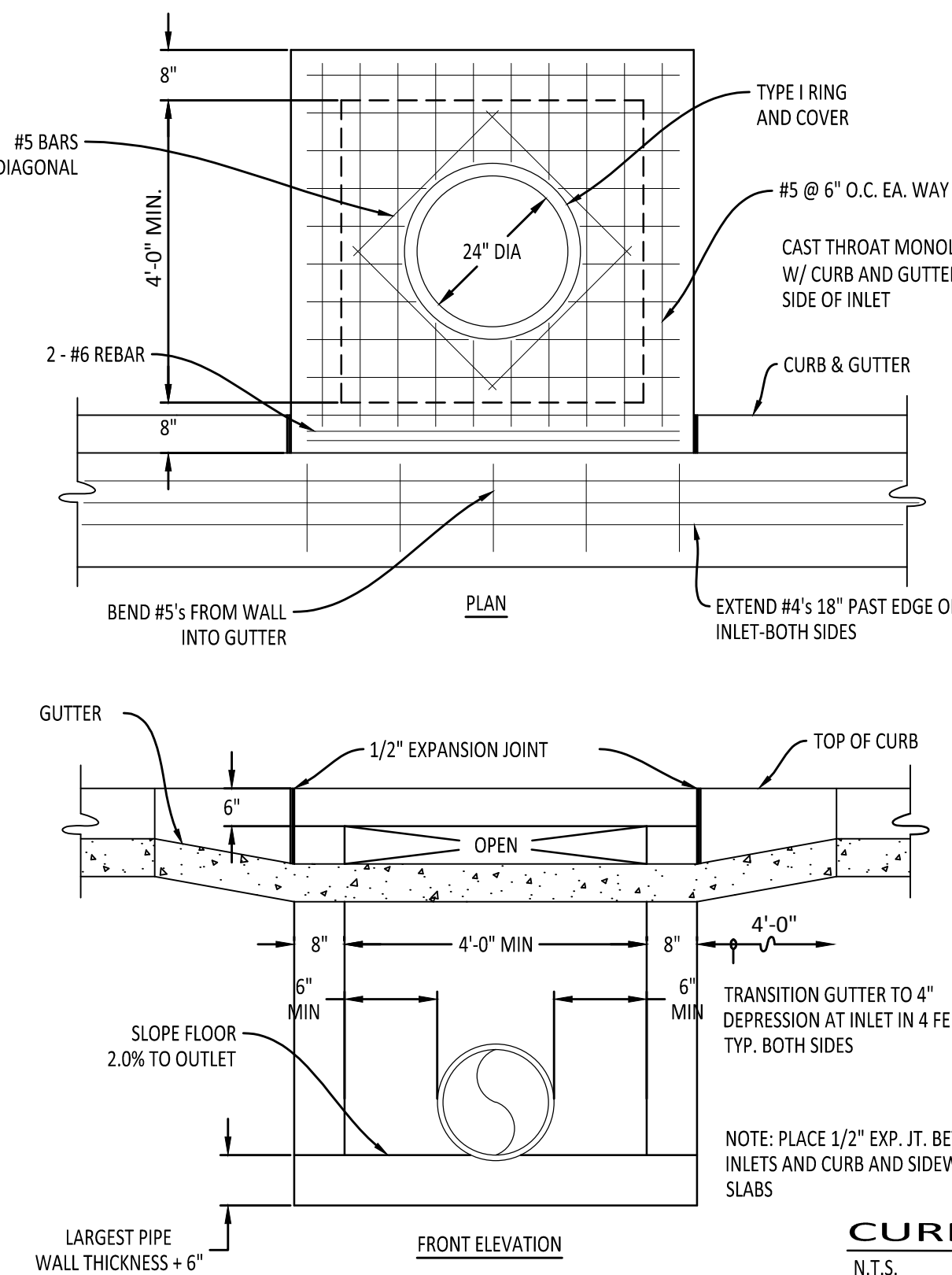
N.T.S.



- NOTES:
1. ALL WELDS TO BE GROUND.
 2. PAINT ALL IRON TUBING WITH (I) POLYESTER POWDERCOAT PRIMER AND (II) INDUSTRIAL ENAMEL FINISH COAT. COLOR TO BE SELECTED BY OWNER.

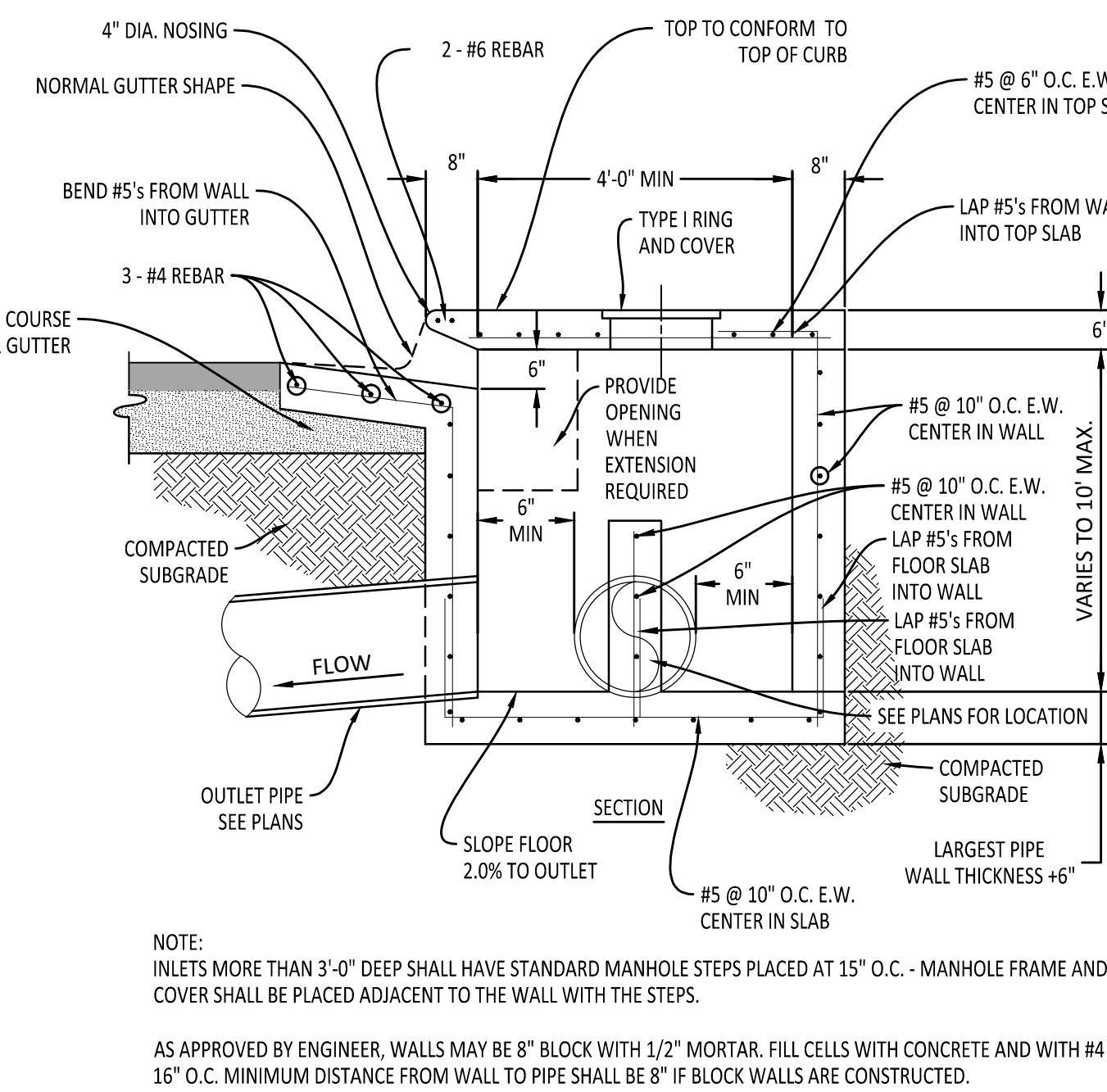
HANDRAIL AT STEPS

8



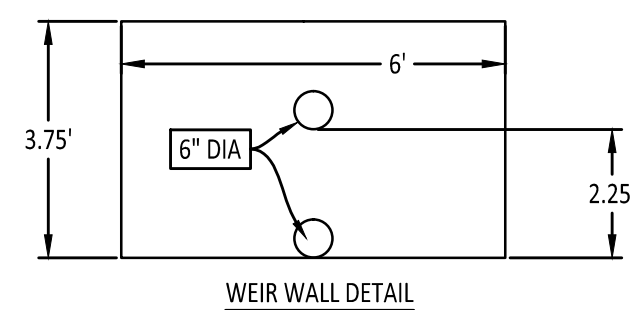
CURB INLET DETAIL

N.T.S.

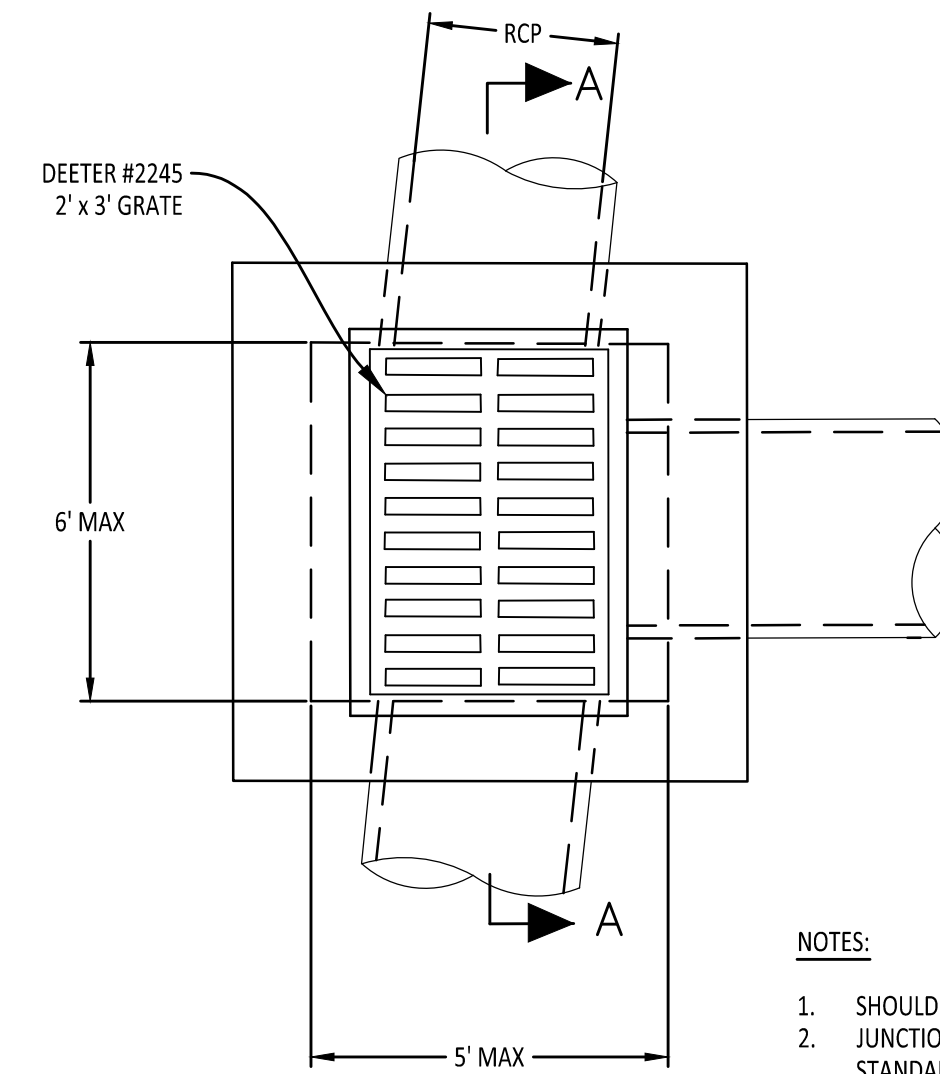


NOTE:
INLETS MORE THAN 3'-0" DEEP SHALL HAVE STANDARD MANHOLE STEPS PLACED AT 15" O.C. - MANHOLE FRAME AND COVER SHALL BE PLACED ADJACENT TO THE WALL WITH THE STEPS.

AS APPROVED BY ENGINEER, WALLS MAY BE 8" BLOCK WITH 1/2" MORTAR, FILL CELLS WITH CONCRETE AND WITH #4 @ 16" O.C. MINIMUM DISTANCE FROM WALL TO PIPE SHALL BE 8" IF BLOCK WALLS ARE CONSTRUCTED.

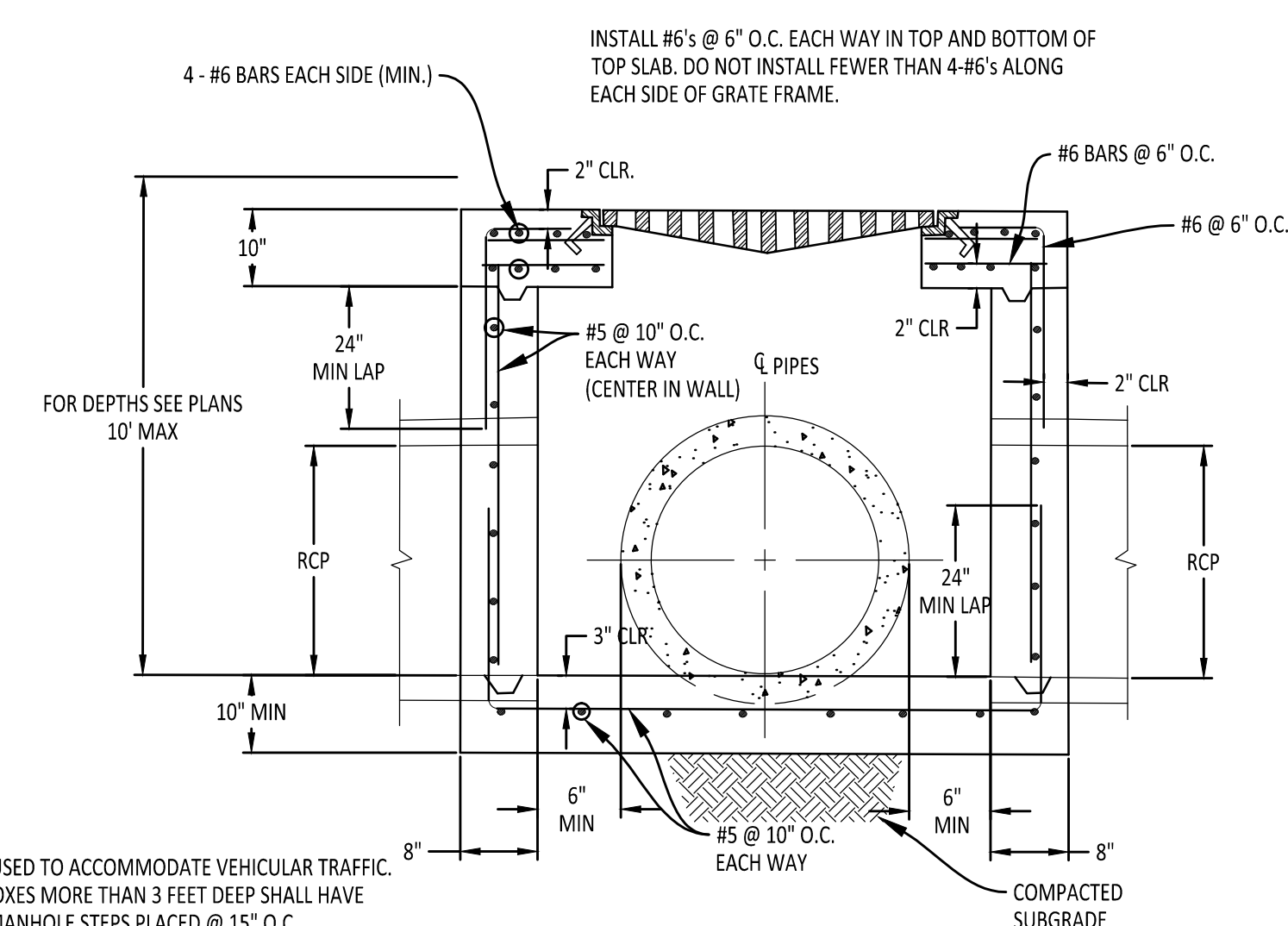


9



PLAN - GRATE INLET - HEAVY

N.T.S.



SECTION "A-A" - GRATE INLET - HEAVY

N.T.S.

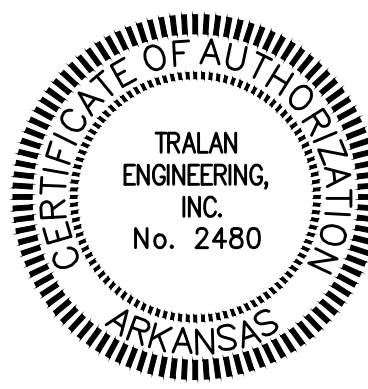
10

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SITE CONSTRUCTION
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