

DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROJECT, LOCATED IN THE FOOTHILLS AREA OF THE ALBUQUERQUE METROPOLITAN AREA, REPRESENTS A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA. THE SITE IS LOCATED ON THE NORTH SIDE OF BRENTWOOD HILLS BLVD NE, EAST OF CHARWOOD PARK BLVD. NE. THE PROPOSED IMPROVEMENTS CONSIST OF A NEW FREE-STANDING CLASSROOM BUILDING NEAR THE EAST END OF THE SITE. AT PRESENT, THE SITE GENERALLY DRAINS FROM EAST TO WEST AND EXHIBITS SIGNIFICANT TOPOGRAPHIC RELIEF ON THE WEST SIDE OF THE BUILDING SITE. ALL RUNOFF IS VIA SURFACE FLOW AND THERE ARE NO PUBLIC STORM DRAINS IN THE SITE OR ADJACENT CITY STREET. DUE TO THE INFILL STATUS, THE CONTINUED FREE DISCHARGE OF ONSITE RUNOFF TO THE ADJACENT STREET WILL BE MAINTAINED AND HAS BEEN ESTABLISHED BY PREVIOUS PLANS. DEVELOPED RUNOFF FROM MOST OF THE NEW BUILDING'S ROOF AREA WILL DISCHARGE DIRECTLY TO THE EAST TO AN EXISTING EMERGENCY ACCESS ROAD THAT WAS CONSTRUCTED WITH THE MOST RECENT PREVIOUS PHASE OF DEVELOPMENT WHICH DISCHARGES DIRECTLY TO THE ADJACENT PUBLIC STREET. THIS PLAN IS SUBMITTED FOR BUILDING PERMIT APPROVAL FOR THE PROPOSED NEW CLASSROOM BUILDING AT THE EAST END OF THE SITE.

II. PROJECT DESCRIPTION

AS SHOWN BY THE SITE AREA ATLAS PAGE H-22, THE SITE LIES ON NORTH SIDE OF BRENTWOOD HILLS BLVD NE, EAST OF CHELWOOD PARK BLVD. NE. THE PROPERTIES TO THE SOUTH, EAST AND NORTH ARE SINGLE FAMILY RESIDENCES. THE SITE TO THE WEST IS A PUBLIC CITY PARK. THE SITE WAS CREATED A FEW YEARS AGO AS PART OF THE PREVIOUS PHASES OF DEVELOPMENT. THE LEGAL DESCRIPTION OF THE SITE IS TRACT A, ONATE ELEMENTARY SCHOOL. AS INDICATED BY PANEL 357 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, AUGUST 16, 2012, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THE NEAREST FLOOD HAZARD ZONE LIES ½ MILE DOWNSTREAM OF THE SITE IS AT THE INTERSECTION OF BRENTWOOD HILLS BLVD NE AND JUAN TABO BLVD NE.

III. BACKGROUND DOCUMENTS & RESEARCH

THE FOLLOWING DOCUMENTS WERE REVIEWED AND REFERENCED IN THE PREPARATION OF THIS DRAINAGE NARRATIVE:

A. GRADING AND DRAINAGE PLAN – ONATE ELEMENTARY SCHOOL DATED 12-30-1983 BY HIGH MESA CONSULTING GROUP (FORMERLY TOM MANN & ASSOCIATES). THIS GRADING PLAN SUPPORTED CONSTRUCTION OF THE GYMNASIUM BUILDING. THIS PLAN IDENTIFIED THE SITE DRAINAGE PATTERNS THAT STILL EXIST TODAY WHEREBY THE NORTHERN PORTION OF THE SITE HAS A GRADED FLOWLINE RUNNING FROM EAST TO WEST TO THE NORTHWEST CORNER OF THE SITE WHERE IT IS FORCED TO TURN SOUTH BY A CURB LOCATED AT THE WEST EDGE OF THE SITE AND GRADUALLY FLOW SOUTH TO THE STREET.

B. ONATE ELEMENTARY SCHOOL DRAINAGE STUDY DATED 04-22-1992, CITY HYDROLOGY FILE H22/D035, BY HIGH MESA CONSULTING GROUP (FORMERLY JEFF MORTENSEN & ASSOCIATES) AND UPDATED 01-04-1994, BY THIS IDENTIFIED SEVERAL SITE AREAS WHERE POORLY DEFINED DRAINAGE PATTERNS RESULTED IN AREAS OF EROSION AND STANDING WATER WHICH RESULTED IN SITE MAINTENANCE AND PEDESTRIAN ACCESS PROBLEMS. RECOMMENDATIONS WERE PRESENTED AND PHASE 1 OF THE IMPROVEMENTS INCLUDED CONSTRUCTION OF A NEW PAVED TRUCK AT THE WEST END OF THE SITE THAT ALSO SERVES AS A DRAINAGE CONVEYANCE TO CARRY SITE FLOWS SOUTH TO BRENTWOOD HILLS VIA NEW SIDEWALK CULVERTS CONSTRUCTED AS PART OF THE PHASE 1 PROJECT.

C. GRADING AND DRAINAGE PLAN – ONATE ELEMENTARY SCHOOL KITCHEN DATED 01-31-2001, CITY HYDROLOGY FILE H22/D035, BY HIGH MESA CONSULTING GROUP (FORMERLY JEFF MORTENSEN & ASSOCIATES). THIS PLAN SUPPORTED AN ADDITION TO THE KITCHEN. IT REFERENCES AND CONFORMS TO THE PREVIOUSLY APPROVED PLANS.

D. CONSTRUCTION PLANS FOR ONATE ELEMENTARY SCHOOL ACCESS IMPROVEMENTS DATED 4-26-2007 BY HIGH MESA CONSULTING GROUP (FORMERLY JEFF MORTENSEN & ASSOCIATES). THIS PLAN SET DESIGNED THREE IMPROVEMENTS BID LOTS OF WHICH TWO WERE CONSTRUCTED. THE NEW IMPROVEMENTS INCLUDED A DRIVEWAY FOR SERVICE ACCESS TO THE PLAYGROUND, DRAINAGE AND EROSION CONTROL WORK ON THE WEST SIDE OF THE NORTHWEST CORNER BUILDING, AND ALSO ADA ACCESS IMPROVEMENTS FROM THE CENTER OF THE CAMPUS TO THE PLAYGROUND / FIELD AREA. THE THIRD BID LOT WAS DESIGNED TO PROVIDE ADA ACCESS AND DRAINAGE IMPROVEMENTS IN SLOPED TRANSITION AREA EAST OF THE MAIN BUILDING AND WEST OF THE PORTABLE CLASSROOM AREA. THIS PROJECT INCLUDED CONSTRUCTION OF A CONCRETE RUNDOWN CHANNEL THAT FLOWS FROM NORTH TO SOUTH ALONG THE EAST EDGE OF THE EXISTING MAIN CLASSROOM BUILDING. THIS RUNDOWN CHANNEL IS THE PROGRAMMED OUTFALL FOR RUNOFF FORM THE CURRENTLY PROPOSED CLASSROOM BUILDING.

E. ONATE ELEMENTARY SCHOOL PRIVATE FIRE ROAD AND ACCESS IMPROVEMENTS DATED 03/15/2010, CITY HYDROLOGY FILE H22/D035, ENGINEER'S CERTIFICATION DATED 12/01/2010. THIS PLAN SET INCLUDED THE THIRD BID LOT IMPROVEMENTS IDENTIFIED BY THE FOREMENTIONED ACCESS IMPROVEMENTS PLAN SET (REFERENCE D), AND ALSO A NEW PERMETER EMERGENCY ACCESS ROAD THAT ALSO SERVED TO IMPROVE INTERNAL SITE DRAINAGE AND ELIMINATE PREVIOUS EROSION PROBLEMS. THESE IMPROVEMENTS WERE CONSTRUCTED TO SUPPORT THE NEW KINDERGARTEN CLASSROOM BUILDING THAT IS CURRENTLY UNDER CONSTRUCTION.

F. GRADING AND DRAINAGE PLAN – ONATE ELEMENTARY SCHOOL KINDERGARTEN CLASSROOM DATED 6/17/2010 (H-22/D035) BY HIGH MESA CONSULTING GROUP. THIS PLAN WAS PREPARED AND SUBMITTED TO SUPPORT CONSTRUCTION OF A NEW KINDERGARTEN CLASSROOM BUILDING, IMMEDIATELY TO THE NORTH OF THE CURRENTLY PROPOSED CLASSROOM BUILDING. THIS PROJECT IS CURRENTLY UNDER CONSTRUCTION.

IV. EXISTING CONDITIONS

AT PRESENT, THE SITE IS DEVELOPED IS AN ACTIVE ELEMENTARY SCHOOL SITE CONTAINING PERMANENT AND PORTABLE BUILDINGS ALONG WITH PAVED PARKING, PLAYGROUND AND FIELD IMPROVEMENTS, AND LANDSCAPING. THE SITE GENERALLY SLOWS FROM NORTHEAST TO SOUTHWEST DISCHARGING RUNOFF TO THE ADJACENT CITY STREET, BRENTWOOD HILLS BLVD NE. NO APPARENT OFFSITE FLOWS ENTER THE SITE FROM THE RESIDENTIAL PROPERTIES THAT SURROUND THE UPHILL (NORTH AND EAST) SIDES OF THE SITE WHICH HAVE BLOCK WALLS PREVENTING RUNOFF FROM IMPACTING THE SITE.

THE NEW CLASSROOM BUILDING PROPOSED HEREIN WILL BE LOCATED AT THE EAST END OF THE SITE WHICH IS THE SITE'S HIGH POINT FROM WHICH DRAINAGE GENERALLY FLOWS FROM EAST TO WEST. THIS SITE PREVIOUSLY COMPARED PORTABLE CLASSROOMS THAT WERE RELOCATED IN 2010 IN ANTICIPATION OF THIS PROJECT. RUNOFF FROM THIS AREA CURRENTLY DRAINS FROM EAST TO WEST, WHERE IT IS INTERCEPTED BY A CONCRETE RUNDOWN CHANNEL CONSTRUCTED IN 2010 TO SERVE THIS AREA (REFERENCE E) THAT FLOWS FROM NORTH TO SOUTH, TO THE EXISTING PARKING LOT WHICH DRAINS OUT TO BRENTWOOD HILLS BLVD THROUGH THE EXISTING DRIVEWAYS.

THERE IS AN EXISTING PAVED PARKING LOT IMMEDIATELY SOUTH OF THE PROPOSED BUILDING SITE. THIS PARKING LOT DRAINS FROM EAST TO WEST WITH RUNOFF DISCHARGING TO BRENTWOOD HILLS BLVD NE VIA EXISTING DRIVEWAY.

V. DEVELOPED CONDITIONS

THE PROPOSED CLASSROOM ADDITION WILL BE LOCATED IN AN AREA THAT PREVIOUSLY HAD PORTABLE CLASSROOMS AND ASSOCIATED PAVED WALKWAYS. THE NEW BUILDING WILL HAVE ROOF DRAINS DISCHARGING THE MAJORITY OF ROOF DRAINAGE DIRECTLY TO THE EAST TO THE EXISTING EMERGENCY ACCESS ROAD WHICH IS PAVED WITH CURB AND GUTTER AND CARRIES RUNOFF TO BRENTWOOD HILLS BLVD. THE BUILDING SITEWORK WILL INCLUDE CONCRETE WALKWAYS, A PLAZA AREA, AND LANDSCAPING IMPROVEMENTS ON THE NORTH AND WEST SIDES OF THE BUILDING. THE NEW BUILDING SITEWORK WILL DRAIN FROM EAST TO WEST TO AN EXISTING SLOPED AREA (5 FT. VERTICAL FALL OVER 20 FT. HORIZONTAL, 5:1 SLOPE) THAT DRAINS DOWN TO THE WEST TO THE EXISTING CONCRETE RUNDOWN CHANNEL THAT DIVERTS RUNOFF TO THE SOUTH. AS DESCRIBED BY THE FOLLOWING, THIS SLOPED AREA WILL BE LANDSCAPED IN A TERRACED MANNER THAT IS DESIGNED TO ACCEPT RUNOFF FORM THE SITE. TWO SMALL, ROOF AREAS WILL HAVE PIPED ROOF DRAINS THAT WILL DISCHARGE DIRECTLY TO THIS LANDSCAPED AREA INTENDED TO SATISFY THE INTENT OF WATER QUALITY REQUIREMENTS. THIS PROJECT ALSO INCLUDES RECONSTRUCTION OF THE EXISTING PAVED PARKING LOT SOUTH OF THE BUILDING. THE PARKING LOT WILL CONTINUE TO DRAIN FROM EAST TO WEST, HOWEVER, SITE RUNOFF WILL NOW BE INTERCEPTED BY A PROPOSED STORM INLET THAT WILL DRAIN INTO A WATER QUALITY BASIN LOCATED AT THE SOUTH END OF THE PROPOSED LANDSCAPED AREA.

AS PREVIOUSLY DESCRIBED, THERE IS A 20 FT. WIDE AREA THAT SLOPES DOWN TO THE DRAINAGE RUNDOWN AT A 5:1 SLOPE. THIS SLOPE WILL BE LANDSCAPED AS THIS PROJECT. THE PROJECT INTENDS TO TERRACE THIS SLOPE AND INTEND TO ACCEPT RUNOFF FROM THE NEW PROJECT AND MEET THE INTENT OF WATER QUALITY AND FIRST FLUSH REQUIREMENTS. THERE WILL BE NUMEROUS POCKETS TO RETAIN WATER, AND RUNOFF THAT DOES NOT INFILTRATE OR RETAIN WILL OVERFLOW TO THE EXISTING DRAINAGE RUNDOWN. THIS AREA WILL HAVE NATURAL ROCK RETAINING WALLS AND FLAT STONE PLATING MIXED WITH AREAS OF CRUSHER FINES. DUE TO THE NATURE OF LANDSCAPING IMPROVEMENTS, IT IS DIFFICULT TO QUANTIFY THE PRECISE VOLUME OF RETENTION AND INFILTRATION, HOWEVER, THE PROPOSED SCHEME IS INTENDED TO MEET THE INTENT OF CITY FIRST FLUSH WATER QUALITY REQUIREMENTS. A COPY OF THE LANDSCAPING PLAN WHICH INCLUDES DETAILED GRADING INFORMATION IS PROVIDED HEREWITH FOR INFORMATIONAL PURPOSES.

VI. GRADING PLAN

THE GRADING PLAN SHOWS THE 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS, 2.) THE LIMIT AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS, AND 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. THE LIMITS OF EXISTING DRAINAGE BASINS SHALL REMAIN THE SAME.

VII. CALCULATIONS

THE CALCULATIONS CONTAINED HEREON ANALYZE THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THESE CALCULATIONS, THE PROPOSED IMPROVEMENTS WILL RESULT IN A SLIGHT INCREASE (0.4 CFS) IN THE DEVELOPED RUNOFF GENERATED BY THIS PORTION OF THE SITE.

ALTHOUGH THERE WILL BE A SLIGHT INCREASE IN RUNOFF AS COMPARED TO THE EXISTING (BARE SOIL) CONDITION, THE OVERALL NET IMPACT WILL BE OFFSET BY THE FACT THAT THIS AREA WAS MOSTLY IMPERVIOUS PAVING AND PORTABLE CLASSROOM BUILDINGS IN THE PRE-2010 CONDITION. ADDITIONALLY, THERE WILL BE AN UNQUANTIFIED AMOUNT OF RETENTION IN THE TERRACED LANDSCAPING AREA THAT WILL FURTHER REDUCE RUNOFF.

VIII. CONCLUSIONS

THE FOLLOWING CONCLUSIONS HAVE BEEN ESTABLISHED AS A RESULT OF THE EVALUATIONS CONTAINED HEREIN:

1. THE PROPOSED IMPROVEMENTS REPRESENT MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA
2. THE PROPOSED IMPROVEMENTS WILL MAINTAIN AND NOT ALTER THE EXISTING DRAINAGE PATTERNS OF THE SITE.
3. THE FREE DISCHARGE OF DEVELOPED RUNOFF TO THE ADJACENT CITY STREETS IS CONSISTENT WITH THE PREVIOUSLY APPROVED PLANS FOR THE SCHOOL SITE.
4. THE PROPOSED IMPROVEMENTS WILL RESULT IN A NEGLIGIBLE GROSS INCREASE IN THE DEVELOPED RUNOFF GENERATED BY THIS SITE THAT WILL BE OFFSET BY LANDSCAPED AREA RETENTION
5. THE PROPOSED IMPROVEMENTS WILL RESULT IN A SLIGHT DECREASE IN THE DEVELOPED RUNOFF AS COMPARED TO PRE-EXISTING CONDITIONS
6. THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS.
7. THE PROPOSED IMPROVEMENTS WILL NOT BLOCK POTENTIAL OFFSITE FLOWS

CALCULATIONS

I. SITE CHARACTERISTICS

A. PRECIPITATION ZONE = **4**

B. $P_{6,100} = P_{300} =$ **2.90**

C. TOTAL PROJECT AREA (A_T) = **26,100 SF**
0.60 AC

D. LAND TREATMENTS

1. EXISTING LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
A		
B		
C	16,615 / 0.38	64
D	9,485 / 0.22	36
		100

2. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
A		
B		
C	4,950 / 0.11	19
D	2,150 / 0.49	81

II. HYDROLOGY

A. EXISTING CONDITION

a. VOLUME	
$E_{10} = (E_{10}A_1 + E_{10}A_2 + E_{10}A_3 + E_{10}A_4)/A_T$	
$E_{10} = (0.00*0.8) + (0.00*1.08) + (0.38*1.46) + (0.22*2.64)/0.60 =$	1.89 IN
$V_{100} = (E_{10}/12)A_T =$	1.89/12*26.10 = 0.0943 AC-FT = 4,108 CF
b. PEAK DISCHARGE	
$Q_p = Q_{100}A_1 + Q_{100}A_2 + Q_{100}A_3 + Q_{100}A_4$	
$Q_p = Q_{100} = (0.00*2.2) + (0.00*2.92) + (0.38*3.73) + (0.22*5.25) =$	2.6 CFS

B. DEVELOPED CONDITION

a. VOLUME	
$E_{10} = (E_{10}A_1 + E_{10}A_2 + E_{10}A_3 + E_{10}A_4)/A_T$	
$E_{10} = (0.00*0.8) + (0.00*1.08) + (0.11*1.46) + (0.49*2.64)/0.60 =$	2.42 IN
$V_{100} = (E_{10}/12)A_T =$	2.42/12*26.10 = 1.206 AC-FT = 5,255 CF
b. PEAK DISCHARGE	
$Q_p = Q_{100}A_1 + Q_{100}A_2 + Q_{100}A_3 + Q_{100}A_4$	
$Q_p = Q_{100} = (0.00*2.2) + (0.00*2.92) + (0.11*3.73) + (0.49*5.25) =$	3.0 CFS

C. COMPARISON

a. VOLUME		
$\Delta V_{100} =$	5255 - 4108 =	1,147 CF (INCREASE)
b. PEAK DISCHARGE		
$\Delta Q_{100} =$	3.0 - 2.6 =	0.4 CFS (INCREASE)

LEGEND

ASPH BOH	ASPHALT BUILDING OVERHANG	INV	INVERT
BW	BLOCK WALL	TA	TOP OF ASPHALT PAVEMENT
C&G	CURB AND GUTTER	TC	TOP OF CURB
C/PM	COMMUNICATION LINE BY PAINT MARK	TG	TOP OF GRATE
CAM	SECURITY CAMERA	FL	FLOWLINE
CC	CONCRETE CURB	+ 20.05	EXISTING SPOT ELEVATION
CCP	CONCRETE DRIVE PAD	14.00	PROPOSED SPOT ELEVATION FOR CURRENT CONSTRUCTION
CF	CONCRETE CRUSHER FINES	14.00	PROPOSED SPOT ELEVATION
CI	CAST IRON PIPE	4920	EXISTING FLOWLINE
CL	CHAIN LINK FENCE	20	PROPOSED FLOWLINE
CLF	CONCRETE LANDING		EXISTING CONTOUR
CND	CONDUIT		EXISTING CONTOUR
CO	CLEANOUT		EXISTING DIRECTION OF FLOW
CONC	CONCRETE		PROPOSED DIRECTION OF FLOW
CP	CURB OPENING		RIGHT OF WAY LINE
CR	CONCRETE RAMP		PUBLIC EASEMENT LINE
CRD	CONCRETE RUNDOWN		HIGH POINT / DIVIDE
CRW	CONCRETE RETAINING WALL		PROPOSED STORM DRAIN
CS	CONCRETE STEPS		PROPOSED INFILTRATION PIT
CSW	CONCRETE SIDEWALK		EXISTING STORM DRAIN MANHOLE
CW	CONCRETE WALL		EXISTING FIRE HYDRANT
DBL	DOUBLE		PROPOSED FIRE HYDRANT
DYS	PAINTED YELLOW DOUBLE STRIPE		FIRE DEPARTMENT CONNECTION
E/PM	ELECTRIC LINE BY PAINT MARK		EXISTING SANITARY SEWER MANHOLE
EA	EDGE OF ASPHALT		SANITARY SEWER MANHOLE
FL	FLOWLINE		EXISTING VALVE BOX
G/PM	GAS LINE BY PAINT MARK		PROPOSED VALVE BOX
GM	GAS LINE WITH PRESSURE REGULATOR VALVE		EXISTING DOUBLE CLEANOUT
GS	GAS SERVICE		PROPOSED DOUBLE CLEANOUT
GVB	GAS VALVE WITH GAS VALVE		EXISTING SINGLE CLEANOUT
HCS	HANDICAPPED ACCESS SIGN		PROPOSED WATER LINE
MC/V	METER CAN WITH BIB VALVE		PROPOSED WATER LINE
MHR	METAL HAND RAIL		EXISTING SANITARY SEWER LINE
MLP	METAL LIGHT POLE ON CONCRETE BASE		PROPOSED SANITARY SEWER LINE
MNT	MOUNTABLE		EXISTING FIRE LINE
OHM	OVERHEAD MAST		EXISTING POST INDICATOR VALVE
PD	PAINTED PEDESTALS		PROPOSED POST INDICATOR VALVE
PS	PAINTED PARKING STALL STRIPE		PROPOSED CONCRETE
PVC	POLYVINYL CHLORIDE PIPE		PROPOSED ASPHALT PAVING
PWD	PAVING PATCH		PROPOSED LANDSCAPE AREA
RDR	ROOF DRAIN		PROPOSED RETAINING WALL
RR	LANDSCAPING RIVER ROCK		PROPOSED BASIN BOUNDARY
SAS	SANITARY SEWER		
SAS/PM	SANITARY SEWER LINE BY PAINT MARK		
SD	STORM DRAIN		
SFP	STEEL GUARD POST		
STD	STANDARD		
SW	SIDEWALK		
SWC	SIDEWALK CULVERT		
TC	TOP OF ASPHALT		
TCO	TOP OF CONCRETE		
TDSW	TURNDOWN SIDEWALK		
TG	TOP OF GRATE		
TRN	ELECTRIC TRANSFORMER		
TS	TRAFFIC SIGN		
TW	TOP OF WALL		
TY	TYPICAL		
W/PM	WATER LINE BY PAINT MARK		
WF	WATER FAUCET		
WB	WATER HOT BOX		
WMB	WATER METER BOX		
WW	WATER VAULT		
WVB	WATER VALVE BOX		
WV	PAINTED UTILITY MARKER		
1.2*	TREE TRUNK DIAMETER		
	CONIFEROUS TREE		
	SMALL CONIFEROUS TREE		
	DECIDUOUS TREE		
	SHRUB		
	BOULDER RETAINING WALL		

WATER LINE CONSTRUCTION NOTES:

1. FOR ALL LINES 12" AND SMALLER, WATER MAIN SHALL BE PVC C-900 DR18 PIPE. DUCTILE IRON IS AN ACCEPTABLE PIPE MATERIAL IN LIEU OF PVC.
2. WATER LINE SHALL HAVE A MINIMUM COVER OF 3'-0" (FINISHED GRADE TO TOP OF PIPE). EXTRA DEPTH TRENCHING, IF REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
3. IN ACCORDANCE WITH SECTION 801 OF THE "STANDARD SPECIFICATIONS", METALLIZED DETECTABLE WARNING TAPE SHALL BE INSTALLED 18" ABOVE ALL PVC PIPE INSTALLED ON THIS PROJECT.
4. JOINT RESTRAINT SHALL BE CONSIDERED INCIDENTAL TO WATER LINE CONSTRUCTION THEREFORE NO SEPARATE PAYMENT WILL BE MADE.
5. JOINT RESTRAINT SHALL BE PROVIDED ON ALL JOINTS OF FIRE LINES.
6. FOR THE PURPOSES OF THIS PROJECT, ALL RESTRAINED JOINTS AND JOINT RESTRAINT SHALL BE MECHANICALLY RESTRAINED. JOINT RESTRAINT LENGTHS SPECIFIED HEREON ARE THE LENGTHS TO BE RESTRAINED EACH SIDE OF THE FITTING.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND INSTALL PIPE SO AS TO NOT EXCEED RIGHT-OF-WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
9. NEW WATER LINE INSTALLATIONS SHALL INCLUDE INSULATED 12 GAUGE COPPER TRACER WIRE INSTALLED CONTINUOUSLY ALONG THE PIPE WITH WATER-PROOF SPLICE BOXES AT JUNCTIONS AND TEES. TRACER WIRE SHALL BE ACCESSIBLE AT ALL VALVES, BACKFLOW PREVENTERS AND SERVICES. TRACER WIRE INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

SANITARY SEWER CONSTRUCTION NOTES:

1. ALL SEWER PIPE SHALL BE PVC (DWV).
2. SLOPES SHOWN ARE BASED ON TRUE DISTANCES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND INSTALL PIPE SO AS TO NOT EXCEED RIGHT-OF-WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
5. NEW SANITARY SEWER LINE INSTALLATIONS SHALL INCLUDE INSULATED 12 GAUGE COPPER TRACER WIRE INSTALLED CONTINUOUSLY ALONG THE PIPE WITH WATER-PROOF SPLICE BOXES AT JUNCTIONS AND TEES. TRACER WIRE SHALL BE ACCESSIBLE AT ALL CLEANOUTS AND SERVICES. TRACER WIRE INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

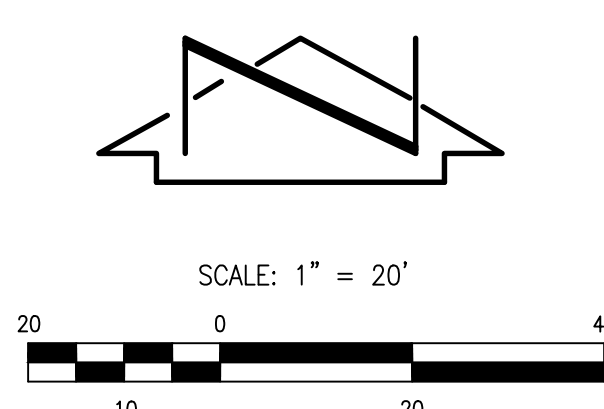
NATURAL GAS CONSTRUCTION NOTES:

1. ALL NATURAL GAS LINES SHALL BE INSTALLED USING PIPE AND FITTING MATERIALS PER PLUMBING SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND INSTALL PIPE SO AS TO NOT EXCEED RIGHT-OF-WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
4. NEW NATURAL GAS INSTALLATIONS SHALL INCLUDE INSULATED 12 GAUGE COPPER TRACER WIRE INSTALLED CONTINUOUSLY ALONG THE PIPE WITH WATER-PROOF SPLICE BOXES AT JUNCTIONS AND TEES. TRACER WIRE SHALL BE ACCESSIBLE AT ALL VALVES AND SERVICES. TRACER WIRE INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

RECORD DRAWING

GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – 1987, PUBLISHED BY THE NEW MEXICO CHAPTER AMERICAN PUBLIC WORKS ASSOCIATION WORK (REVISED 12/08).
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.
3. UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, SCHOOL FILES OF THE ALBUQUERQUE PUBLIC SCHOOLS FACILITIES, RECORD AND CONSTRUCTION COA/CONDUIT DISTRIBUTION MAPS AND UTILITY LINE-SPOTS PROVIDED BY ONPOINT UTILITY LOCATING SERVICES. SITE UTILITY DIAGRAM DATED FEBRUARY 23, 2015. IN ADDITION UTILITY LINE-SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NO. 2015082003). UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE. THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY FOR THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE, STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
4. SHOULD A CONFLICT EXIST BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY FOR ALL PARTIES.
5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.
6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH.
7. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
8. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
9. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING ANY ORDER OF WORK. THE ENGINEER MAY TAKE NECESSARY MEASURES TO ENSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT REPLACEMENT. REPLACEMENT SHALL BE THE RESPONSIBILITY OF THE ENGINEER. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED.
10. ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, LATEST EDITION.
11. IF THE REMOVAL OF EXISTING CURB AND GUTTER, SIDEWALK, AND/OR PAVING IS REQUIRED, THE CONTRACTOR SHALL SAWCUT AND/OR REMOVE TO THE NEAREST JOINT. WHEN ABUTTING NEW PAVEMENT TO EXISTING PAVEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXISTING PAVING TO A STRAIGHT LINE IN ORDER TO REMOVE ANY BROKEN OR CRACKED PAVEMENT. CURB AND GUTTER AND/OR PAVEMENT SHOWN AS EXISTING AND NOT TO BE REMOVED UNDER THIS CONTRACT AND WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
12. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL (CONTAMINATED OR OTHERWISE), ASPHALT PAVING, CONCRETE PAVING, ETC. SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH ANY APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A BORROW SITE AND IN HAUL THERE TO CONSTRUCTION, NO SEPARATE PAYMENT SHALL BE MADE.
13. A BORROW SITE FOR IMPORT MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A BORROW SITE AND IN HAUL THERE TO CONSTRUCTION, NO SEPARATE PAYMENT SHALL BE MADE.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY OBTAINING THE REQUIRED COMPACTION. THE CONTRACTOR SHALL SELECT AND USE METHODS WHICH SHALL NOT BE INJURIOUS OR DAMAGING TO THE EXISTING FACILITIES AND STRUCTURES WHICH SURROUND THE WORK AREAS.
15. THE CONTRACTOR SHALL CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS IN ORDER TO PRESERVE THE EXISTING IMPROVEMENTS AND SO AS NOT TO INTERFERE WITH THE OPERATIONS OF THE EXISTING FACILITIES.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND/OR INSTALL PIPE SO AS TO NOT EXCEED RIGHT-OF-WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES OR IMPROVEMENTS; THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
18. ALL DIMENSIONS AND RADII OF CURB, CURB RETURNS, AND WALLS ARE SHOWN TO THE FACE OF CURB AND/OR WALL.
19. THE CONTRACTOR SHALL NOTIFY THE OWNER 48 HOURS PRIOR TO STRIPPING SO THAT LAYOUT CAN BE VERIFIED.
20. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE



1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE-SPOTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL EXISTING UTILITIES. SHOULD THE CONTRACTOR BE UNABLE TO NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT CONSULTING THE ENGINEER.

3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

4. UTILITY INFORMATION SHOWN HEREIN IS BASED UPON ONSITE SURFACE AND SUBSURFACE RECORD FILES OF THE PUBLIC SCHOOLS FACILITIES, DESIGN AND CONSTRUCTION, CEA/ABQ/BCUA DISTRIBUTION MAPS AND UTILITY LINE-SPOTS PROVIDED BY ONPOINT UTILITY LOCATING SERVICES. SITES VISITED BETWEEN FEBRUARY 23, 2015 AND FEBRUARY 24, 2015. RECORD FILES FROM THE NEW MEXICO ONE CALL SERVICE (TICKET NO. 2015082003).

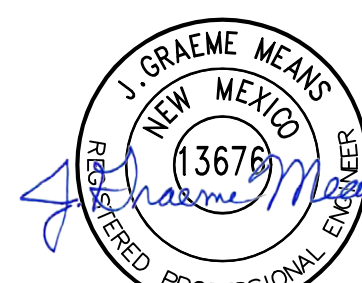
UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY. NOT ALL UTILITIES ARE SHOWN. WHERE NONE ARE SHOWN, IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY. THIS INFORMATION MAY BE INCOMPLETE, OR MAY BE BASED ON OBSOLETE DATA. THE CONTRACTOR AND THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITIES. THIS INFORMATION IS NOT GUARANTEED TO BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITIES IN THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED TO ANY UTILITIES, LINES, PIPELINES, OR UNDERGROUND UTILITIES, EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL, AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

STUDIO SOUTHWEST ARCHITECTS, INC.
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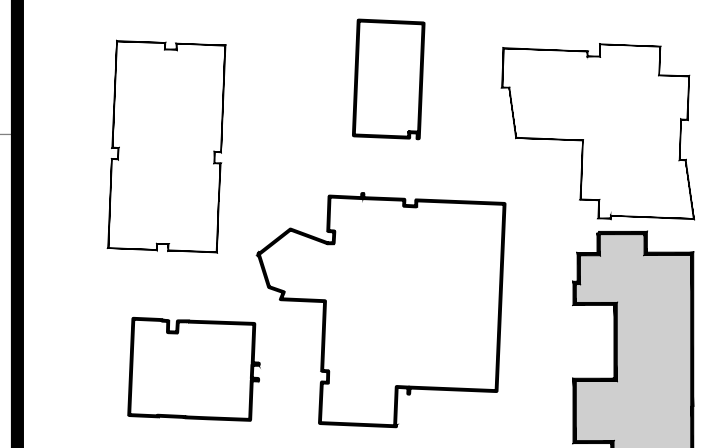
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ALBUQUERQUE, NEW MEXICO 87109
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Architect	Engineer
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08-25-2017 11-19-2015

12415 BRENTWOOD HILLS, NE
ALBUQUERQUE, NM
87112



NT:

R	08/17	AS-BUILT & CERTIFY
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[illegible]

MARK	DATE	DESCRIPTION
ISSUE:	100%	SUBMITTAL
PROJECT NO:	0822	
CAD DWG FILE:	150071_CG-101	
DRAWN BY:	S.C.C./J.Y.R.	
CHECKED BY:	G.M.	
DATE:	NOVEMBER 19, 2015	

SHEET TITLE

GRADING PLAN

CG-101

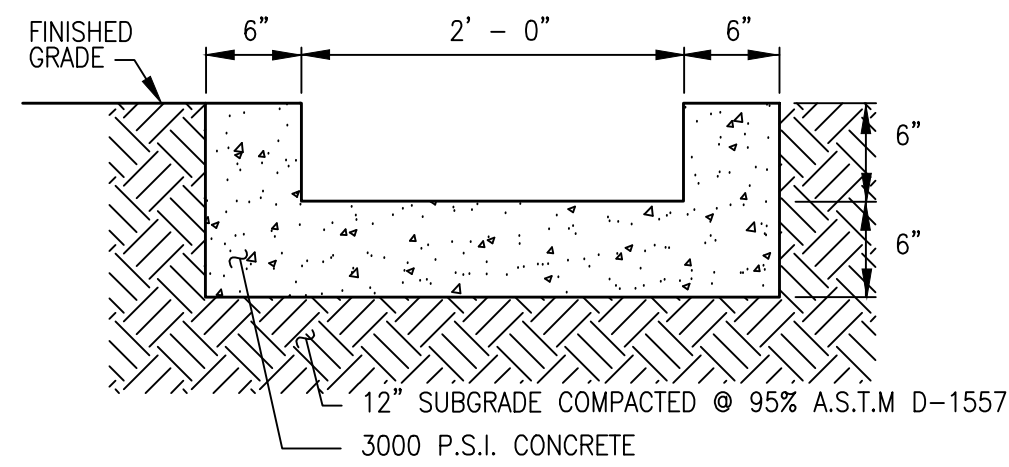
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FOR CERTIFICATION, SEE SHEET C-001

NOTE:

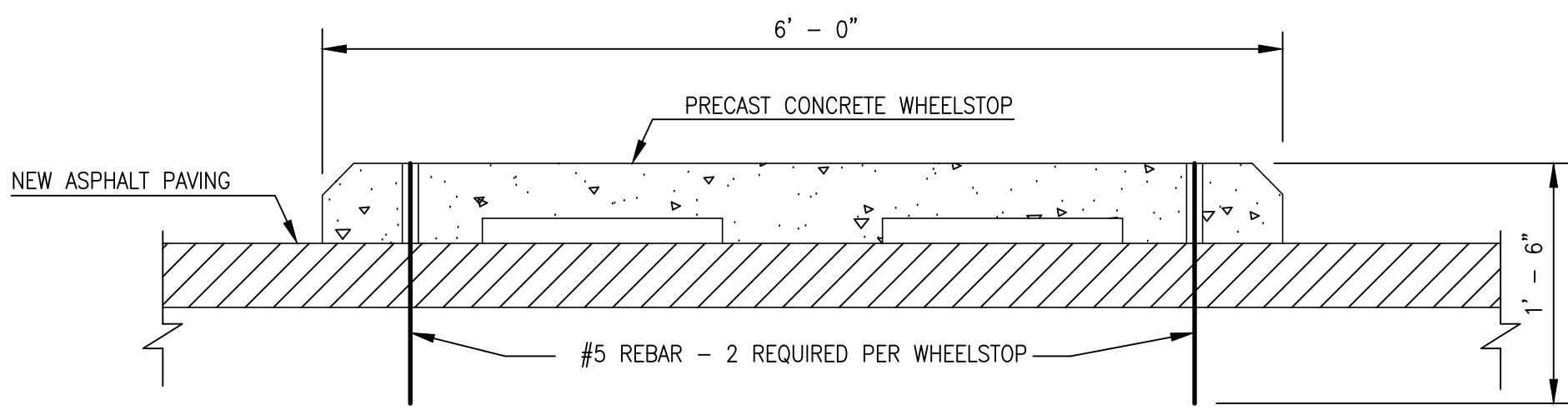
THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON THE "PLAN OF TRACT A, ONATE ELEMENTARY SCHOOL" PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, RECORDED 11/16/2010 (2010C-128, DOC.# 2010116363). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE "PARTIAL TOPOGRAPHIC AND UTILITY SURVEY" PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 03/06/2015 (2014.181.6).

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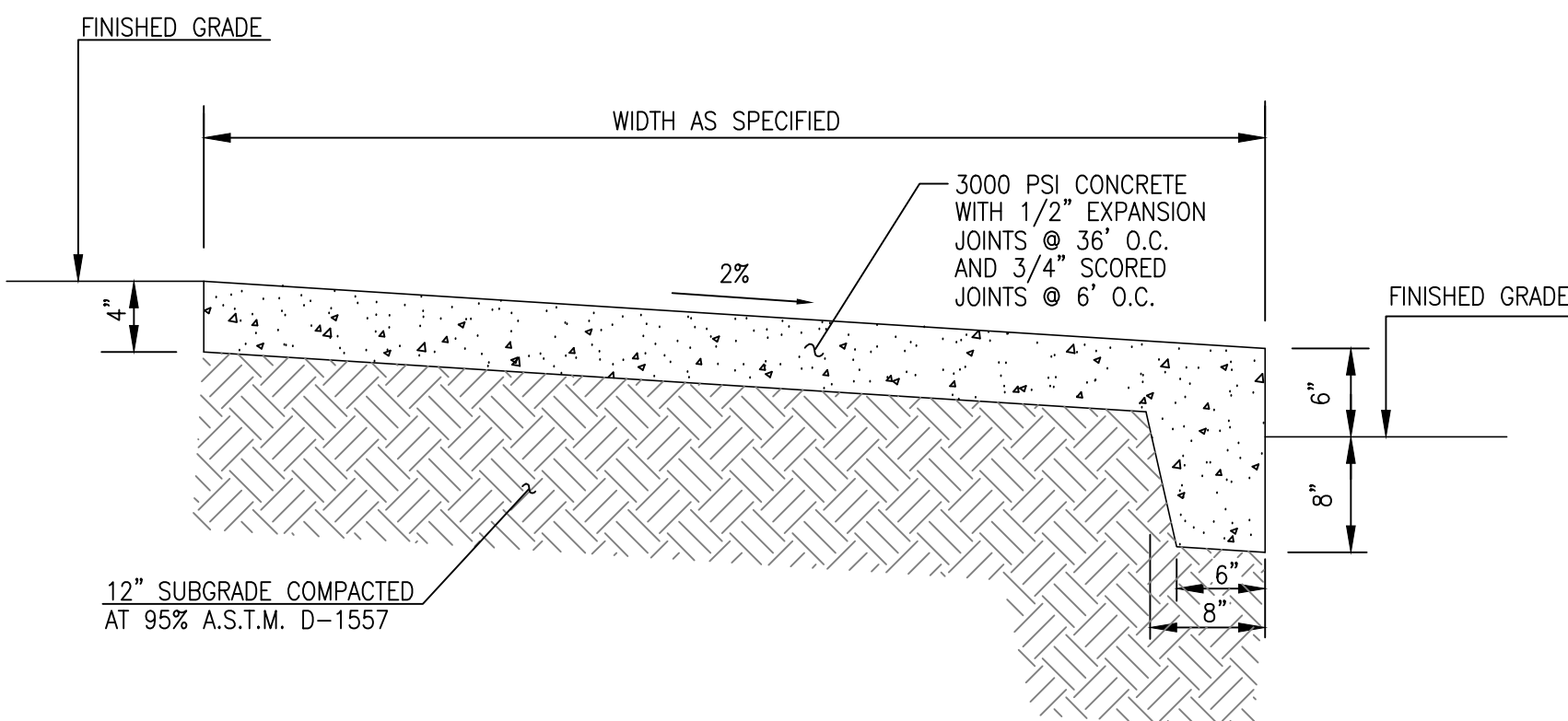
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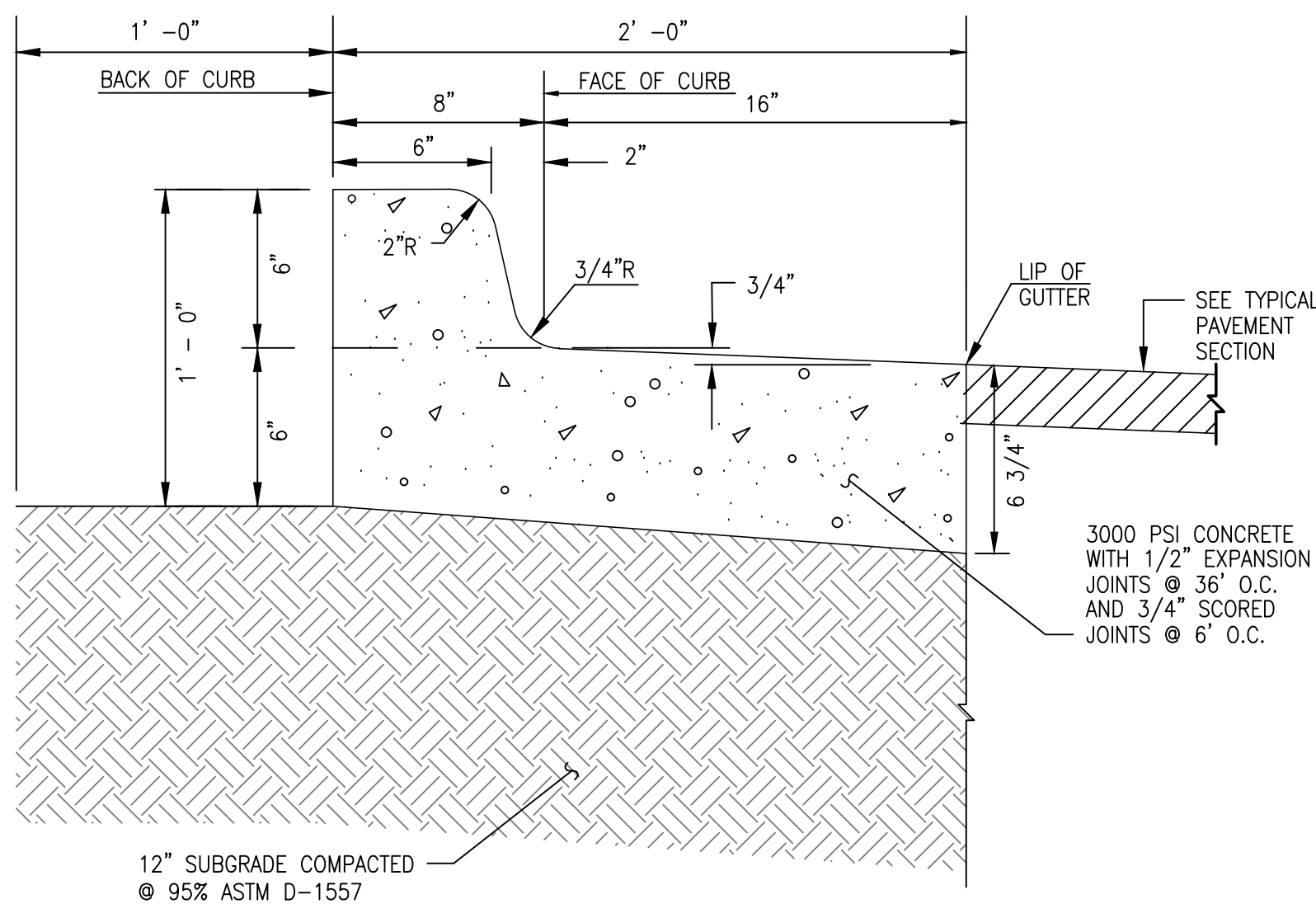
D1 TYPICAL RUNDOWN SECTION
SCALE: 1" = 1'-0"



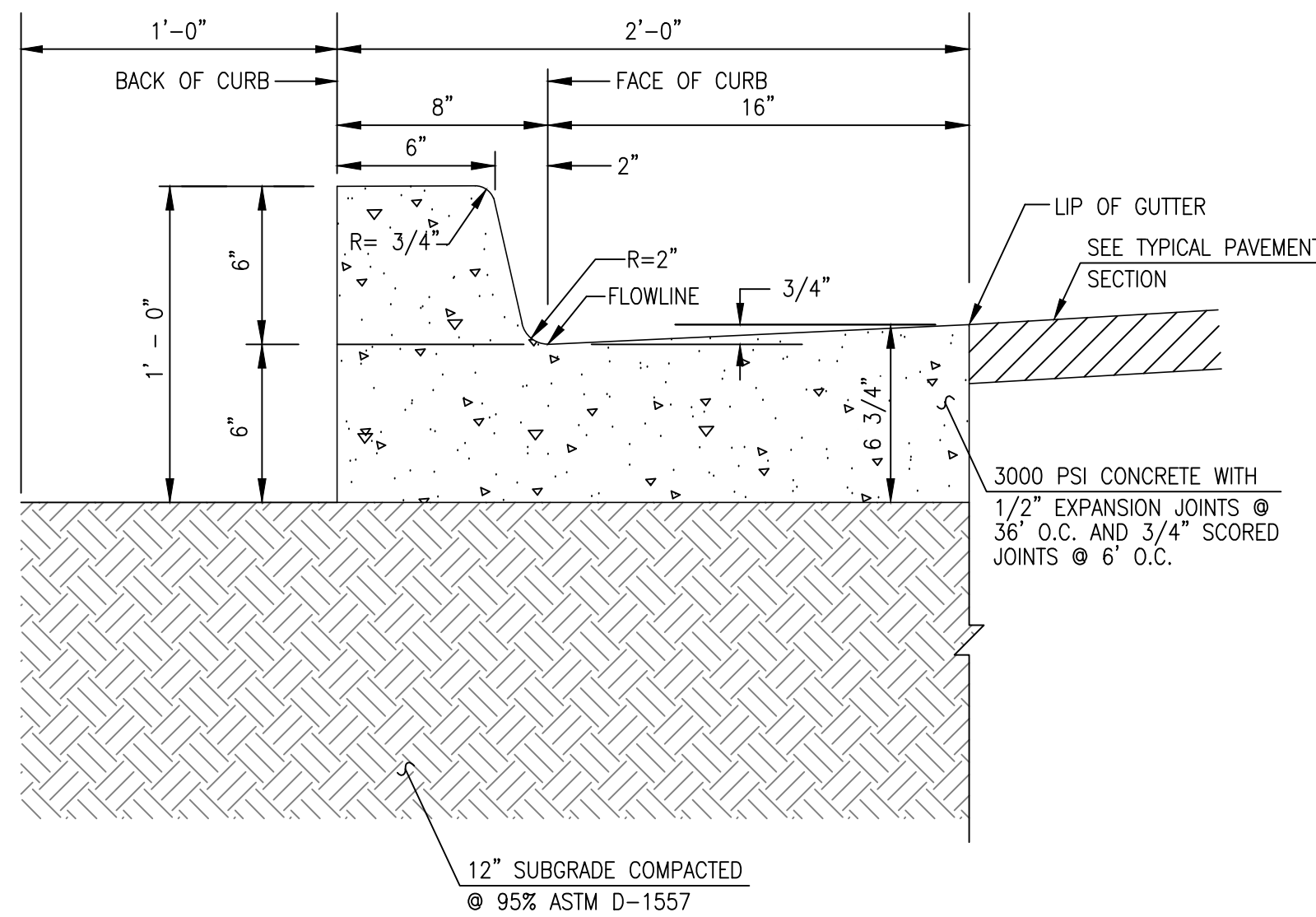
C1 WHEELSTOP SECTION
SCALE: 1" = 0'-6"



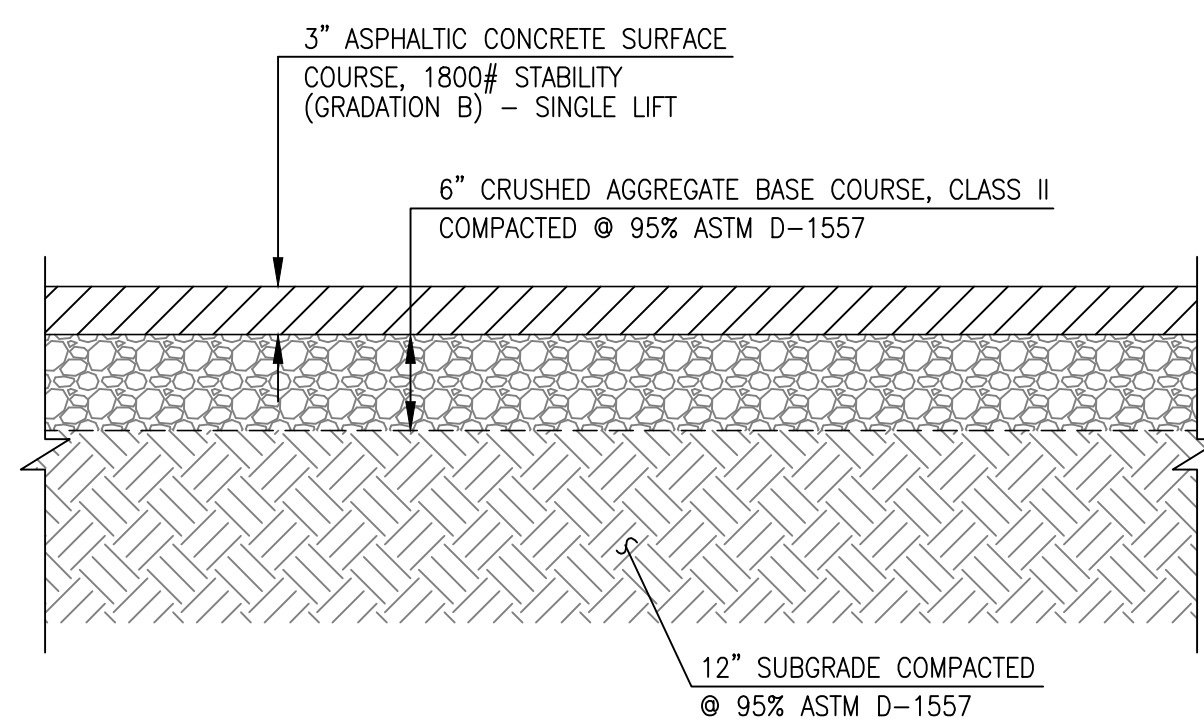
B1 TURNDOWN SIDEWALK SECTION
SCALE: 1" = 1'-0"



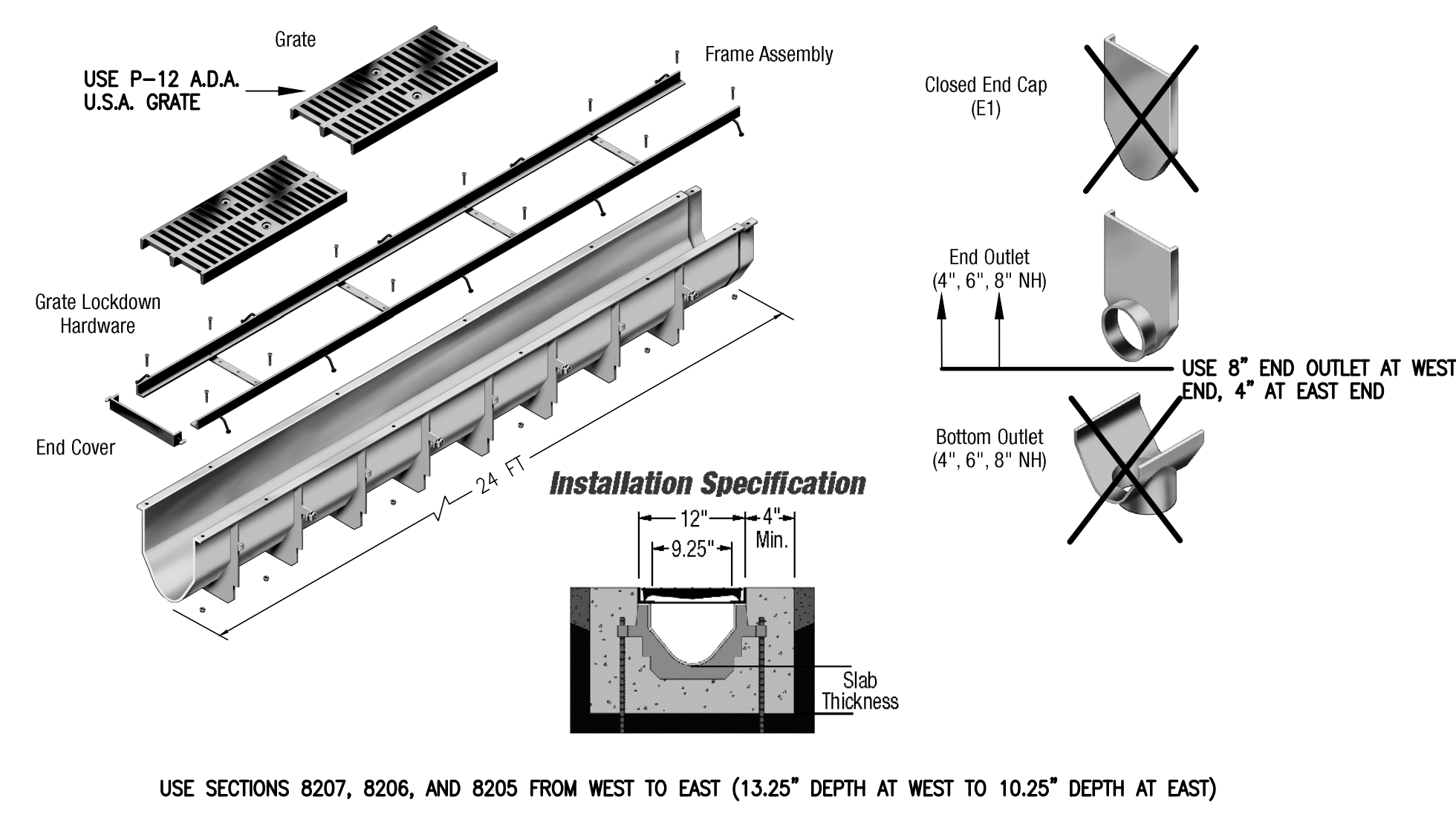
A1 TYPICAL SIX-INCH DEPRESSED CURB AND GUTTER
SCALE: 1" = 0'-6"
NOTE: USE THIS SECTION FOR CASES WHERE PAVING SLOPES AWAY FROM FACE OF CURB



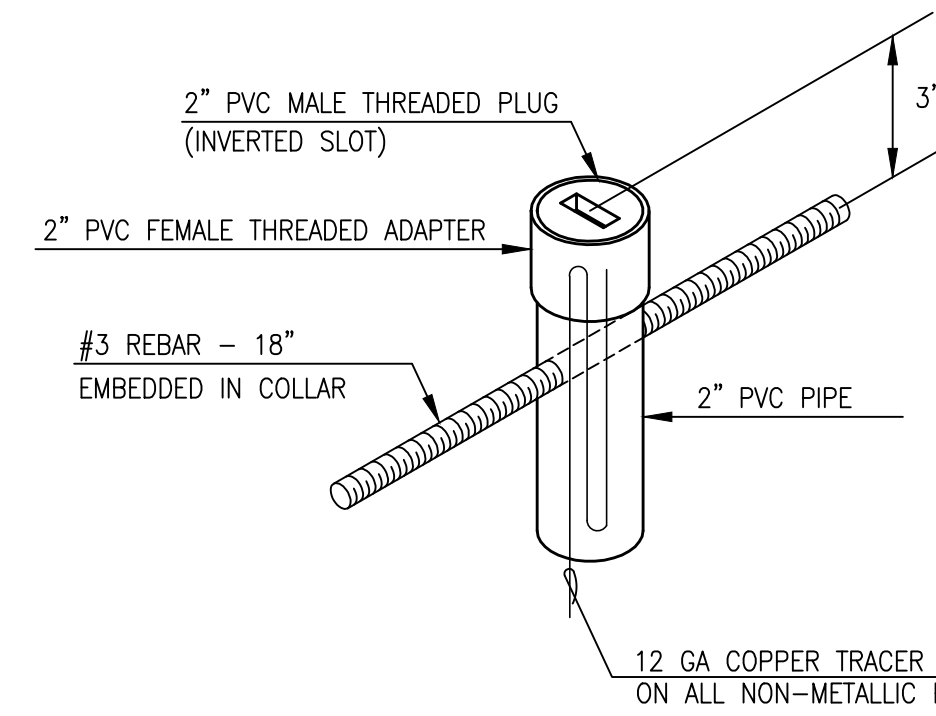
C3 TYPICAL SIX-INCH CURB & GUTTER
SCALE: 1" = 0'-6"



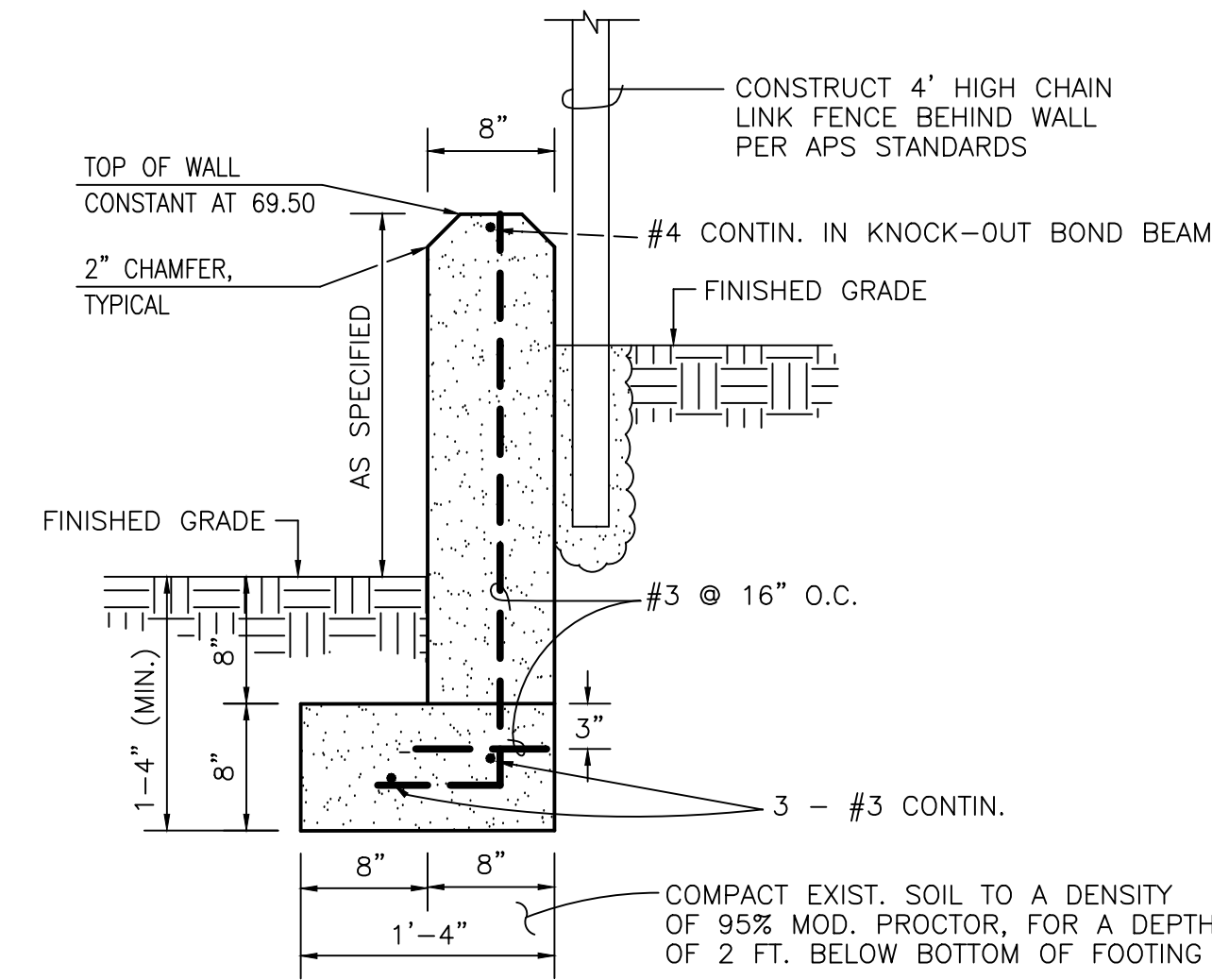
NOTE: PAVEMENT SECTION TAKEN FROM THE GEOTECHNICAL REPORT BY GEOTEST INC., DATED 5-21-2015
B3 TYPICAL ASPHALT PAVEMENT W/ BASE COURSE SECTION
SCALE: 1" = 1'-0"



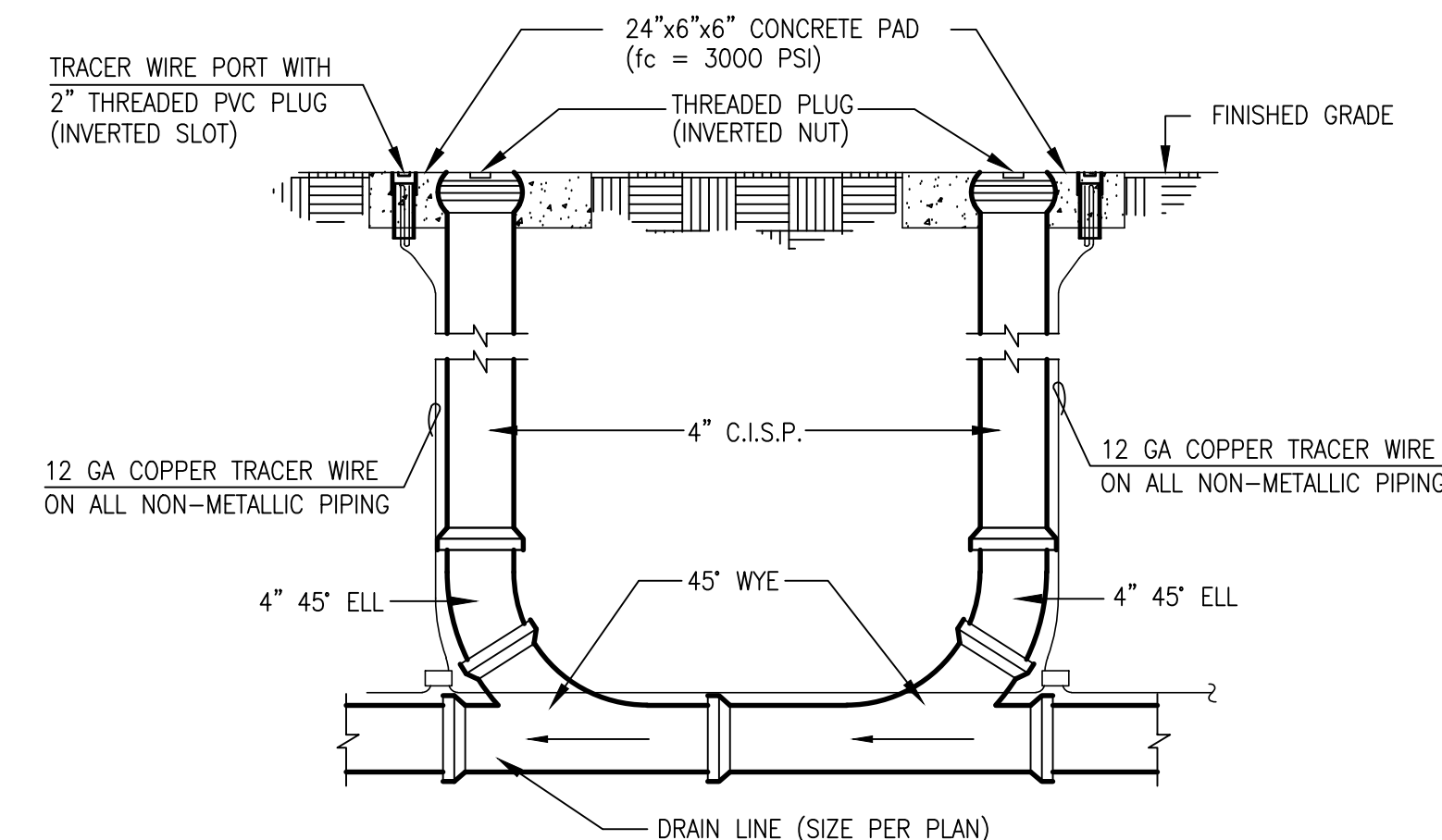
A3 TRENCH DRAIN SECTIONS AND DETAILS (ZURN Z-882)
SCALE: 1" = 2'-0"



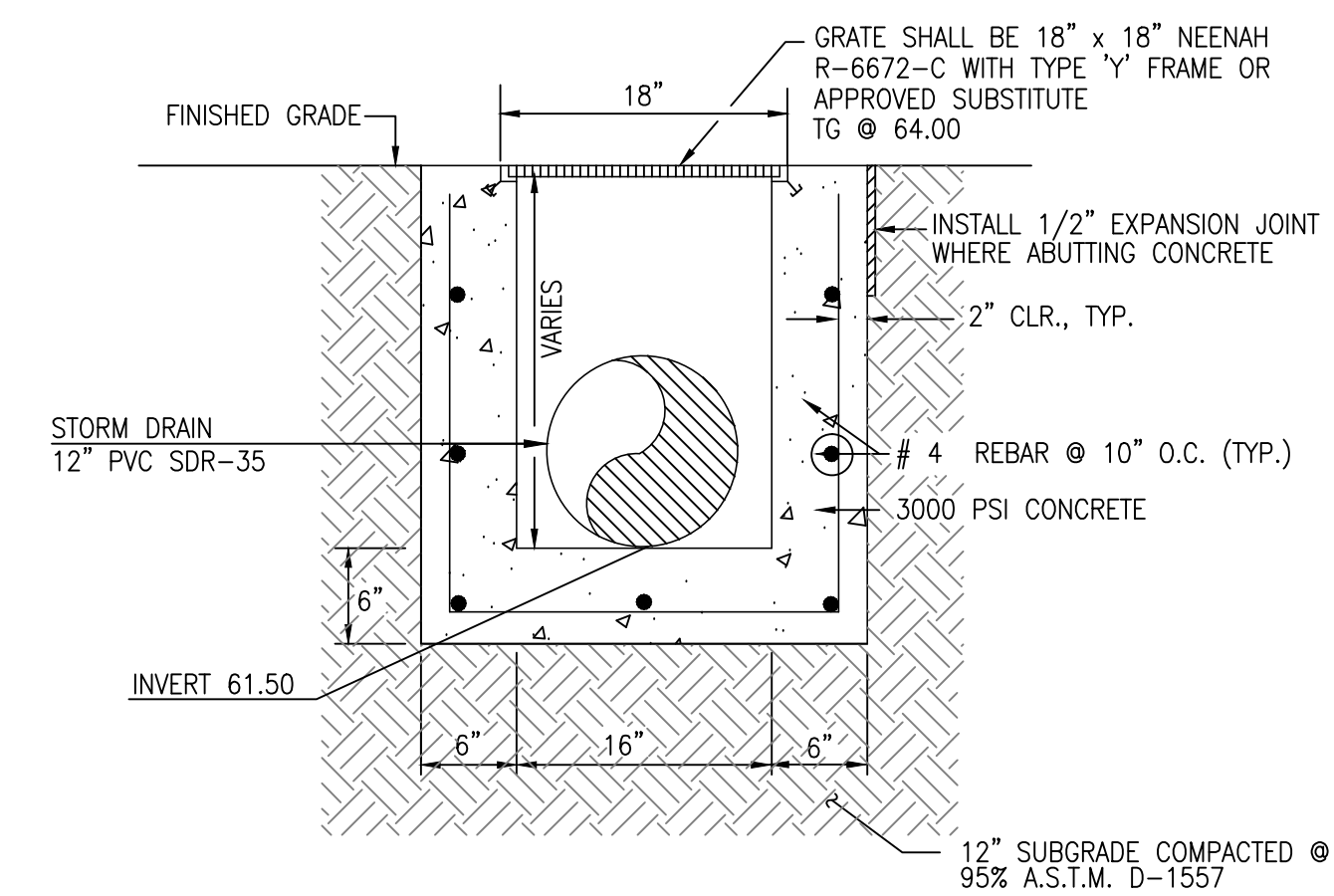
D5 TYPICAL TRACER WIRE ACCESS PORT
NOT TO SCALE



C5 TYPICAL RETAINING WALL < 3'
SCALE: 1" = 1'



B5 TYPICAL DOUBLE CLEANOUT SECTION
NOT TO SCALE



A5 TYPICAL 18"x18" STORM INLET SECTION
SCALE: 1" = 1'

RECORD DRAWING

STUDIO
SW
ARCHITECTS

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Architect

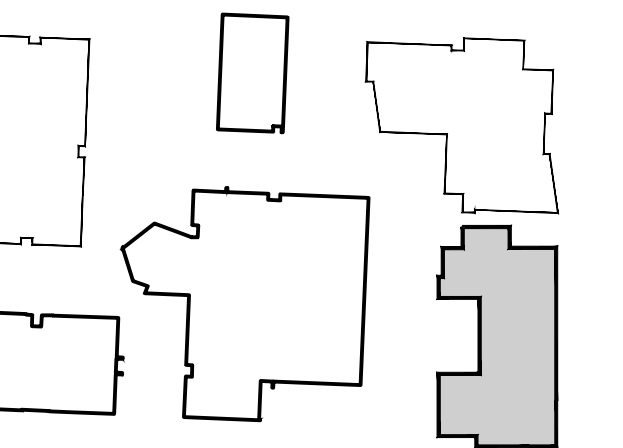
Engineer

J. GRAEME MEANS
NEW MEXICO
13676
REGISTERED PROFESSIONAL ENGINEER

08-25-2017 11-19-2015

ONATE E.S.
CLASSROOM
BUILDING

12415 BRENTWOOD HILLS, NE
ALBUQUERQUE, NM
87112



Key Plan

NTS

REV	DATE	AS-BUILT & CERTIFY
1	08/25/17	AS-BUILT & CERTIFY

MARK	DATE	DESCRIPTION
ISSUE:		100% SUBMITTAL
PROJECT NO:		0822
CAD DWG FILE:		150071_CG-501
DRAWN BY:		S.C.C./J.Y.R.
CHECKED BY:		G.M.
DATE:		NOVEMBER 19, 2015

SHEET TITLE

GRADING SECTION AND DETAILS

CG-501

2016.184.7
2015.007.1