

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

April 9, 2025

Graeme Means, P.E.  
High Mesa, a Bowman Company  
6010-B Midway Park Blvd NE  
Albuquerque, NM 87109

**RE:   Brillante! Early Learning Center  
      1005-B 18<sup>th</sup> Street NW  
      Grading and Drainage Plan  
      Engineer's Stamp Date: 02/28/2025  
      Hydrology File: J13D218  
      Case # HYDR-2025-00076**

Dear Mr. Means:

PO Box 1293

Based upon the information provided in your submittal received 3/7/2025, the Grading and Drainage Plans are approved for Building Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

Albuquerque

**PRIOR TO CERTIFICATE OF OCCUPANCY:**

NM 87103

1. Engineer's Certification, per the DPM Part 6-14 (F): Engineer's Certification Checklist For Non-Subdivision is required.

www.cabq.gov

If you have any questions, please contact me at 505-924-3314 or [amontoya@cabq.gov](mailto:amontoya@cabq.gov).

Sincerely,

Anthony Montoya, Jr., P.E.  
Senior Engineer, Hydrology  
Planning Department, Development Review Services



Drainage Plan:

I. Introduction and Executive Summary

This site is located in the Sawmill Area on the west side of 18<sup>th</sup> Street NW, north of the NM Museum of Natural History, and is owned by the Explora Educational Development, LLC. This plan has been prepared and submitted for building permit approval for the new Brilliante Early Learning Center (CPN 7011.95). This new building will be part of the City of Albuquerque's development of Lot 1-B-2 Oldtown-Freeway, Limited. The proposed improvements referenced herein are in accordance with the overall drainage concepts set forth in the approved 2023 Conceptual Grading and Drainage Plan for Lots 1-B-1 and 1-B-2, Oldtown-Freeway, Limited, dated 05-12-2023 (J13-D101).

The Brilliante site is designed and will be constructed by a city project. The proposed overall drainage concept will be to use subsurface infiltration systems to initially retain approximately 60% of the 100-year runoff from the lot, with excess runoff from larger events overflowing to the east to 18<sup>th</sup> Street and to the west to Lot 1-B-1.

There is an existing linear retention pond along the eastern frontage of the site that receives runoff from the eastern third of the lot until the pond capacity is exceeded and it will then overflow to the west onto proposed Lot 1-B-1. This linear pond continues to the north across the eastern frontage of adjacent Lot 2-A and receives runoff from most of Lot 2-A until the pond capacity is exceeded and it will then overflow to the south onto the subject site. The site is subject to a private cross-lot drainage easement with Lot 2-A to the north established by prior platting and currently accepts runoff from the SW corner of Lot 2-A during large stormwater events that exceed retention pond capacity. These existing flows will continue to be accepted at the NW corner of Lot 1-B-2 / NE corner of Lot 1-B-1.

II. Project Description

The existing legal description is Lot 1-B-2, Oldtown-Freeway, Limited. This lot was created by 2024 platting action (24C-0023), Lots 1-B-1, 1-B-2, and 2-A all have cross-lot drainage easements that will be maintained and honored with this proposed building project.

As indicated by Panel 331 of 825 of the National Flood Insurance Program Flood Insurance Rate Maps published by FEMA for Bernalillo County, New Mexico, effective August 18, 2012, a portion of the site is encumbered by a designated Flood Hazard Zone (AH 4959). The proposed building will lie outside of the AH zone limits and be elevated to a proposed FF of 4962, this project will not grade within or displace any of the existing floodplain.

III. Background Documents & Research

The preparation of this plan relied upon the following document:

- Conceptual Grading and Drainage Plan for Lots 1-B-1 and 1-B-2, Oldtown-Freeway Limited, prepared by HMC dated 05/12/2023, NMPE 13676. This conceptual plan was approved by city hydrology on 5-26-23 and recorded in drainage file J13-D218. This plan addressed the existing drainage concepts for Basin 1-B-1 and 1-B-2, including the existing onsite stormwater ponds, private subsurface stormdrain systems, and impact of the existing floodplain along the west border of Lots 1-B-1 and 1-B-2. This plan established the criteria for a new subsurface stormwater infiltration system with a capacity of 14,000 CF to replace the existing 7,785 CF of pond along the east edge of the site that will be removed during site development. This subsurface stormwater infiltration system must also capture the stormwater quality volume generated by the site. The 2023 plan also denotes that the overflow from this basin is permitted to release to 18<sup>th</sup> Street NW at 2.75 CFS/acre as established by the COA DPM Section 6-5(c) for non-single family residential and commercial development. Finally, the approved 2023 plan denotes that Lot 1-B-2 accept overflow runoff from Lot 2-A via the existing flood plain along the west edge of Lot 1-B-2

IV. Existing Conditions

The site is bounded on the east by 18<sup>th</sup> Street NW, a fully developed public street with curb and gutter. There is no public storm drain in the 18<sup>th</sup> Street frontage, and there is high point in 18<sup>th</sup> Street near the NE corner of the site whereby 18<sup>th</sup> Street drains from north to south to the intersection at Mountain Road NW where existing storm inlets introduce runoff into the Mountain storm drain. Lot 2-A to the north is a paved storage lot that is topographically higher than Lot 1-B-2. The site is bounded on the west by an old rail spur, the site is bounded on the south by the existing natural history museum.

The site is almost entirely impervious - paved with asphalt pavement except for the existing retention pond on the east side. It was previously used as a storage facility. The site is divided into two existing drainage basins with the eastern portion of Basin 1-B-2 (approximately 1/2 of the site area) generally sloping to the east to an existing linear retention pond fronting the lot along 18<sup>th</sup> Street. This pond has a capacity of 7,785 CF that is less than the 15,560 CF of 100 year 6-hr volume generated by the overall lot. The western 1/2 of the Basin 1-B-2 generally drains to the west to the existing flood hazard zone along the railroad spur and then south within the floodplain where it discharges near the SE corner of Lot 1-B-1 to an existing concrete channel. The channel runs along the northern property line of the natural history museum, and was constructed to accept runoff from the site pursuant to the aforementioned 1993 agreement. All runoff is surface drainage and there are no subsurface storm drains.

Offsite flows do not enter the site from 18<sup>th</sup> Street that has curb and gutter, or from the natural history museum to the south. The rail spur area to the west exhibits parallel topography at a slightly lower elevation and does not contribute offsite flows.

Offsite flows enter the site from the north from Lot 2-A. As further described by the following: There is a linear retention pond that runs along the east side of Lots 2-A and 1-B-2. The majority (3/4) of the lot drains to the east directly to the retention pond, and the western ¼ of the lot drains to the west to flood zone area and then south along the old railroad spur to a set of single "D" inlets near the SE corner of Lot 1-A that are then piped to the east back to the retention pond. Runoff in excess of the onsite Lot 2-A ponding (10,745 CF) will overflow and continue to the south onto existing Lot 1-B-1 within the railroad spur floodplain area. This flow must continue to be accepted and conveyed along the floodplain area.

In summary, the combined retention ponds on Lots 2-A and 1-B-2 have a capacity of 18,530 CF whereas the combined 100 year, 6 hour volume is 28,030 CF and the combined 100 year, 10-day volume is 42,795 CF. Combined runoff in excess of 18,530 at WSL 4958 will result in either back-up or bypass into the existing railroad spur floodplain area between Lots 1-B-1 and 1-B-2 that will outfall to the drainage channel on the natural history museum.

V. Developed Conditions

Lot 1-B-2 will be developed as the Brilliante Explora Early Childhood Center by the City of Albuquerque CPN 7011.95. It will be a 13,400 SF building. The building will be centrally located, with paved parking on the north and south sides of the building, and landscaped play areas to the east and west sides. Development of the site will fill in the existing linear retention pond along the 18<sup>th</sup> Street frontage for this lot and install a new subsurface retention / infiltration storage system with capacity for 14,000 CF, located in the south parking lot. This 14,000 CF system greatly exceeds the existing 7,785 CF of pond being removed and will have initial storage (not counting infiltration) for 100% of the 100 year, 6-hour event, an overflow for the system is designed to discharge the excess v10 day volume (20,770 CF) to 18<sup>th</sup> Street via bubbler inlet and sidewalk culvert that is limited to less than the 2.75 CFS/acre allowed in the valley per DPM 6-5(c). Lot 1-B-2 is 2.04 acre, so the allowable overflow discharge equates to 5.6 CFS; the 12" overflow storm drain is calculated to discharge at 4.4 CFS.

Roof drainage and hardscape areas will drain via a combination of surface flow to storm inlets, and direct roof drain piping piping to a new private subsurface storm drain system that discharges into the 14,000 CF storage system.

The site generates 2,130 CF of stormwater quality volume that will be conveyed to / managed by the 14,000 CF stormwater storage system.

Overflow runoff from Lot 2-A will be accepted at the NW corner of Lot 1-B-2 and flow through the west edge of the site in the existing railroad spur floodplain area. The floodplain area not be changed, and no obstructions will be constructed within the floodplain. A new storm inlet will be installed near the southwest corner of the site within the floodplain area to accept runoff from the future play areas on the west side of the building and connect to the new 14,000 CF infiltration system. A checkvalve will be installed on the piping from the floodplain area to the 14,000 CF storage system to avoid overflow from that system discharging to the floodplain.

VI. Calculations

Calculations analyzing the existing and developed conditions for the 100 year, 6-hour rainfall event have been prepared for Basin 1-B-2. In addition, 100 year 10-day calculations have been prepared for Basin 1-B-2 as they drain to a subsurface infiltration / detention system. The procedure for 40 acre and smaller basins, as set forth in DPM 6-2(A) has been used to quantify the peak rate of discharge and volume of runoff generated. As demonstrated by these calculations, the proposed development will result in a decrease in peak rate and volume of runoff generated via the conversion of mostly impervious paving to a site with a relatively significant percentage of landscaping. The proposed v100, and Q100 (14,000 CF and 7.9 CFS) are less than the volume and rate anticipated by the conceptual plan (15,060 CF and 8.1 CFS).

VII. Conclusions

- This drainage plan addresses the development of proposed Lot 1-B-2 to support building permit approval.
- Site development will result in a decrease in stormwater volume generated and peak rate of discharge as compared to both the existing condition and the condition anticipated by the conceptual plan.
- Lot 1-B-2 will continue to accept offsite flows from the north (Basin 2-A), and will provide new subsurface retention / infiltration storage system with controlled overflow release to 18<sup>th</sup> Street NW at the allowable rate (Q<sub>overflow</sub>= 4.4 CFS < Q<sub>allow 2.5 cfs/ac</sub> = 5.6 CFS).
- Portions of the floodplain area at the west edge of the site will be re-developed from asphalt pavement to gravel mulch landscaping, however, the grade within that area will not be changed and no new obstructions will be constructed within the floodplain limits.
- Stormwater quality volume generated by the site (2,130 CF) will be managed on site via discharge to the 14,000 CF subsurface infiltration / retention.

Calculations:

I. Site Characteristics

- A. Precipitation Zone = 2 2.29 IN  
B. P<sub>100, 6HR</sub> = P<sub>500</sub> = 88.910(SF)  
C. TOTAL PROJECT AREA (A<sub>T</sub>) = 2.04 AC

D. Land Treatments

EXISTING LAND TREATMENT			DEVELOPED LAND TREATMENT		
BASIN 1-B-2			BASIN 1-B-2		
88,910(SF)			88,910(SF)		
LAND TREATMENT	AREA (SF/AC)	%	LAND TREATMENT	AREA (SF/AC)	%
A			A		
B			B	11,000(SF)	12%
C	16,000(SF)	18%	C	17,020(SF)	20%
D	72,910(SF)	82%	D	60,890(SF)	68%
	1.67(AC)			1.40(AC)	

II. Hydrology

A. Existing Condition 100 Year Storm

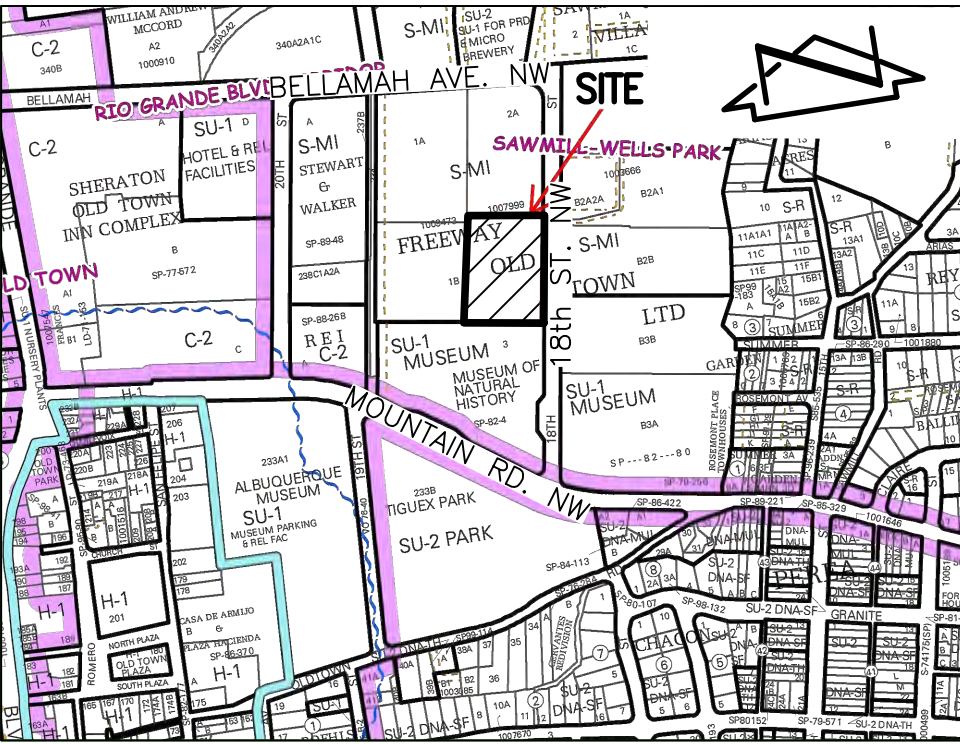
1. BASIN 1-B-2  
a. VOLUME 100-YR, 6-HR  
W<sub>T6</sub> = (E<sub>A</sub> \* A<sub>A</sub> + E<sub>B</sub> \* A<sub>B</sub> + E<sub>C</sub> \* A<sub>C</sub> + E<sub>D</sub> \* A<sub>D</sub>) / A<sub>T</sub>  
V<sub>100, 6 HR</sub> = (E<sub>6</sub> / 12) \* A<sub>T</sub> ⇒ (2.10' / 12) \* 2.04 = 0.3572 AC-FT = 15,560 CF  
b. VOLUME 100-YR, 10-DAY  
V<sub>100, 10 DAY</sub> = V<sub>100, 6HR</sub> + A<sub>D</sub> \* (P<sub>100, 10 DAY</sub> - P<sub>500</sub>) / 12 in/ft  
V<sub>100, 10 DAY</sub> = 0.3572 + 1.67 \* (3.62 - 2.29) / 12 in/ft = 0.5423 AC-FT = 23,620 CF  
c. PEAK DISCHARGE 100-YR  
Q<sub>100</sub> = Q<sub>A</sub> \* A<sub>A</sub> + Q<sub>B</sub> \* A<sub>B</sub> + Q<sub>C</sub> \* A<sub>C</sub> + Q<sub>D</sub> \* A<sub>D</sub>  
⇒ (1.71 \* 0.00) + (2.36 \* 0.00) + (3.05 \* 0.37) + (4.34 \* 1.67) = 8.4 CFS

B. Developed Condition 100 Year Storm

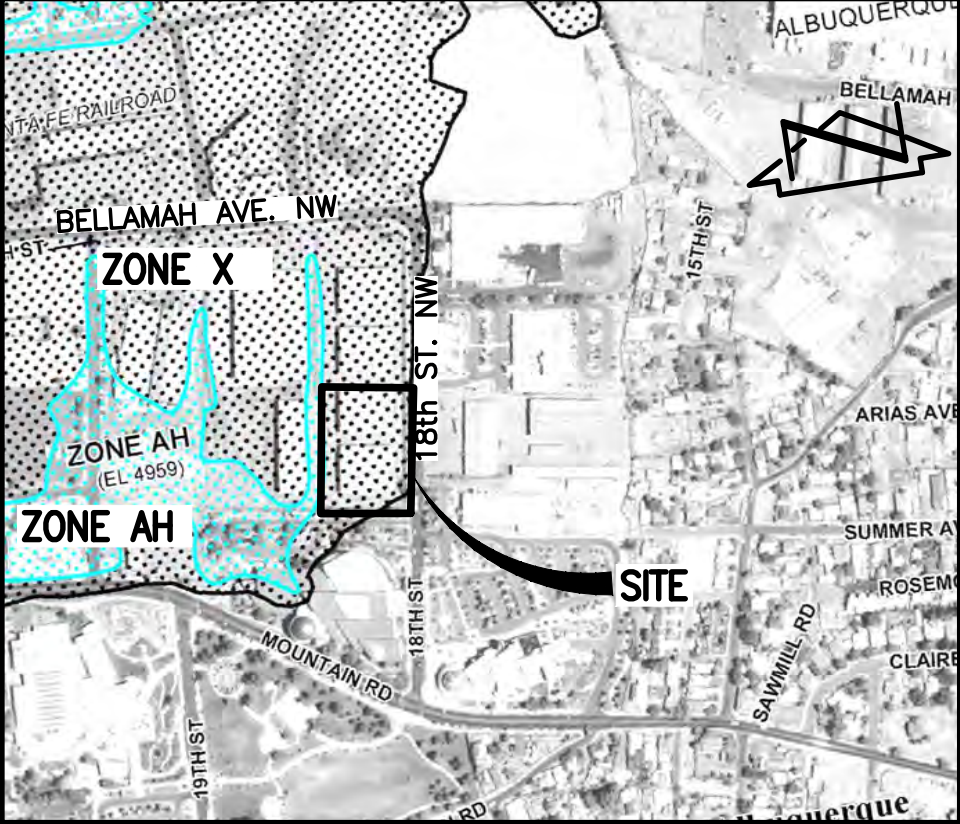
1. BASIN 1-B-2  
a. VOLUME 100-YR, 6-HR  
W<sub>T6</sub> = (E<sub>A</sub> \* A<sub>A</sub> + E<sub>B</sub> \* A<sub>B</sub> + E<sub>C</sub> \* A<sub>C</sub> + E<sub>D</sub> \* A<sub>D</sub>) / A<sub>T</sub>  
V<sub>100, 6 HR</sub> = (E<sub>6</sub> / 12) \* A<sub>T</sub> ⇒ (1.89' / 12) \* 2.04 = 0.3215 AC-FT = 14,000 CF  
b. VOLUME 100-YR, 10-DAY  
V<sub>100, 10 DAY</sub> = V<sub>100, 6HR</sub> + A<sub>D</sub> \* (P<sub>100, 10 DAY</sub> - P<sub>500</sub>) / 12 in/ft  
V<sub>100, 10 DAY</sub> = 0.3215 + 1.40 \* (3.62 - 2.29) / 12 in/ft = 0.4767 AC-FT = 20,770 CF  
c. STORM WATER QUALITY VOLUME  
V<sub>SWQV</sub> = (P<sub>SWQV</sub> / 12) \* A<sub>D</sub>  
⇒ (0.42' / 12) \* (1.40) = 0.0489 AC-FT = 2,130 CF  
d. PEAK DISCHARGE 100-YR  
Q<sub>100</sub> = Q<sub>A</sub> \* A<sub>A</sub> + Q<sub>B</sub> \* A<sub>B</sub> + Q<sub>C</sub> \* A<sub>C</sub> + Q<sub>D</sub> \* A<sub>D</sub>  
⇒ (1.71 \* 0.00) + (2.36 \* 0.25) + (3.05 \* 0.39) + (4.34 \* 1.40) = 7.9 CFS  
e. 12" OVERFLOW STORM DRAIN CAPACITY (ORIFICE EQUATION FOR PIPE ENTRANCE CA)  
Q<sub>12" OVERFLOW</sub> = C \* A \* (2g \* h)<sup>1/2</sup>  
⇒ 0.98 \* 0.78 FT<sup>1/2</sup> \* (2 \* 32.2 FT/S<sup>2</sup> \* 0.5 FT)<sup>1/2</sup> = 4.4 CFS  
Q<sub>AK1 OVER 12 IN CH-BAC</sub> = 5.6 CFS > Q<sub>12" OVERFLOW</sub> = 4.4 CFS

C. Comparison 100 Year Storm

1. BASIN A-1  
a. VOLUME 100-YR, 6-HR  
V<sub>100, 6 HR</sub> = 14,000 - 15,560 = -1,560 CF (DECREASE)  
b. PEAK DISCHARGE 100-YR  
ΔQ<sub>100</sub> = 7.9 - 8.4 = -0.5 CFS (DECREASE)



VICINITY MAP J-13  
N.T.S.



F.I.R.M. PANEL 331 of 825  
N.T.S. DATED 08-16-2012

LEGAL DESCRIPTION

LOT 1-B-2, FREEWAY-OLDTOWN LIMITED

PROJECT BENCHMARK

AN AGRS BRASS DISK STAMPED "5-1134", SET IN A CONCRETE CURB, NORTH OF THE INTERSECTION OF MOUNTAIN ROAD NW AND 19TH STREET NW.  
ELEVATION = 4960.499 FEET (NAVD 1988)

TEMPORARY BENCHMARK #210 (T.B.M.)

A MAG NAIL SET IN ASPHALT PAVEMENT IN THE NORTHEAST QUADRANT OF THE PROJECT SITE, AS SHOWN ON SHEET 2.  
ELEVATION = 4960.43 FEET (NAVD 1988)

TEMPORARY BENCHMARK #211 (T.B.M.)

A MAG NAIL SET IN ASPHALT PAVEMENT IN THE SOUTHEAST QUADRANT OF THE PROJECT SITE, AS SHOWN ON SHEET 2.  
ELEVATION = 4959.90 FEET (NAVD 1988)

TEMPORARY BENCHMARK #212 (T.B.M.)

A MAG NAIL SET IN ASPHALT PAVEMENT IN THE SOUTHWEST QUADRANT OF THE PROJECT SITE, AS SHOWN ON SHEET 2.  
ELEVATION = 4959.78 FEET (NAVD 1988)

NOTE:

THIS IS NOT A BOUNDARY SURVEY OR A RIGHT-OF-WAY SURVEY. APPARENT PROPERTY CORNERS, RIGHT-OF-WAY LINES, OR PROPERTY LINES AS SHOWN ARE DERIVED FROM RECORD SURVEY PLATS, RIGHT-OF-WAY MAPS, OR DEEDS REFERENCED HEREON AND ARE NOT GUARANTEED OR TO BE RELIED ON FOR THE ESTABLISHMENT OF PROPERTY LINES.  
THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON A BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 09/05/2023 (2022.066.2) AND THE PLAT OF LOTS 1-B-1 AND 1-B-2 FREEWAY-OLDTOWN, LIMITED RECORDED 3/11/24. THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 09/05/2023 (2022.066.2).

2023.057.1

HIGH MESA

a Bowman company

6010-B Midway Park Blvd. NE, Albuquerque, NM 87109  
P:505.345.4250  
highmesacg.com | bowman.com

NO.	ISSUE	DATE
PROJECT	SCALE	
7011.95 CITY OF ALBUQUERQUE BRILLANTE! EARLY LEARNING CENTER		
	RMKM PROJECT NO. 2301 - 7011.95	
	PROJECT MANAGER G.M.	
1005-B 18th St NW ALBUQUERQUE, NM 87104	MODELED BY J.Y.R.	

SHEET TITLE  
DRAINAGE PLAN, CALCULATIONS  
& VICINITY MAP  
DESIGN PHASE  
100% CONSTRUCTION  
DOCUMENTS  
SHEET NUMBER



CG-100



**SPECIFICATION KEYED NOTES**

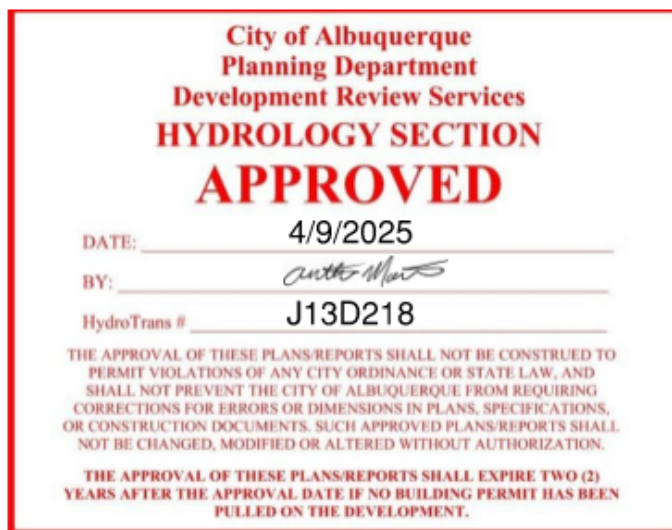
SPEC. KEY	DESCRIPTION
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**CONSTRUCTION NOTES:**

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR APPROVED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS-PUBLIC WORKS CONSTRUCTION-2020 EDITION (JUNE 2020).
- 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.
- 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.
- 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.
- UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE TOPOGRAPHIC AND UTILITY SURVEY CONDUCTED BY THIS FIRM DATED 09/05/2023 AND INCLUDED AS SHEET WF-101 OF THIS PLAN SET. THAT UTILITY SURVEY AND SUBSURFACE UTILITY ENGINEERING EFFORT IS NOT ALL-INCLUSIVE AND MAY NOT REPRESENT UTILITIES/INFRASTRUCTURE THAT HAVE BEEN ABANDONED-IN-PLACE, WERE INACCESSIBLE, OR OTHERWISE UNDETECTABLE DUE TO UNFORESEEN AND UNCONTROLLABLE SITE AND/OR UTILITY CONDITIONS. FURTHER, THAT UTILITY INVESTIGATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE PROPERTY OWNER, DEVELOPER, OR CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ALL EXISTING UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, NEW MEXICO EXCAVATION LAWS (NMES1), MUNICIPAL AND LOCAL ORDINANCES, SITE SPECIFIC RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE UTILITY LINES AND FACILITIES.
- ALL UTILITIES WITHIN THE PROJECT LIMITS THAT ARE RENDERED OBSOLETE AND / OR UNUSED AS A RESULT OF THIS PROJECT SHALL NOT BE ABANDONED IN PLACE, BUT SHALL INSTEAD BE COMPLETELY REMOVED WITHIN THE PROJECT AREA AND CAPPED AT THE PROJECT LIMITS, UNLESS OTHERWISE NOTED.
- THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.
- THE GRADES INDICATED ON THIS PLAN ARE FINISHED GRADES UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING SUBGRADE AT INDICATED ELEVATIONS THAT SHALL ACCOMMODATE PROPOSED IMPROVEMENTS AS INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO, SURFACE DRAINAGE STRUCTURES, PAVING AND LANDSCAPING SURFACING.
- ALL KNOWN EXISTING UTILITIES ARE SHOWN HEREON FOR REFERENCE AND INFORMATION. ALTHOUGH REMOVALS OF CONFLICTING UTILITIES MAY BE ACCOUNTED FOR BY OTHER SHEETS AND OTHER DISCIPLINES, THEY ARE SHOWN HEREON TO HELP PREVENT INADVERTENT DAMAGE AND INFORM THE GENERAL CONTRACTOR OF UTILITIES THAT MAY NOT HAVE BEEN OTHERWISE ACCOUNTED FOR.

**DESIGN GRADING LEGEND:**

INV	INVERT
TA	TOP OF ASPHALT PAVEMENT
TC	TOP OF CURB
TG	TOP OF GRATE
+ 20.05	EXISTING SPOT ELEVATION
+ 17.25	PROPOSED SPOT ELEVATION
.....	EXISTING FLOWLINE
.....	PROPOSED FLOWLINE
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	EXISTING DIRECTION OF FLOW
---	PROPOSED DIRECTION OF FLOW
---	RIGHT OF WAY LINE
---	PUBLIC EASEMENT LINE
---	HIGH POINT / DIVIDE
---	PROPOSED CHECK VALVE
---	PROPOSED STORM DRAIN
---	PROPOSED INFILTRATION PIT
---	PROPOSED STORM INLET
---	PROPOSED STORM DRAIN MANHOLE
---	EXISTING STORM DRAIN MANHOLE



NO.	ISSUE	DATE
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PROJECT 7011.95 CITY OF ALBUQUERQUE SCALE

**BRILLANTE! EARLY LEARNING CENTER**  
RMKM PROJECT NO. 2301 - 7011.95

PROJECT MANAGER G.M.

1005-B 18th St NW ALBUQUERQUE, NM 87104 MODELED BY J.Y.R.

SHEET TITLE GRADING PLAN

DESIGN PHASE 100% CONSTRUCTION DOCUMENTS

SHEET NUMBER



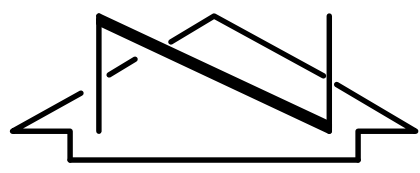
**CG-101** 02-28-2025

**KEYED NOTES:**

- CONSTRUCT SINGLE 'D' STORM INLET PER TYPICAL DETAILS, SHEET CG-501
- INSTALL SUBSURFACE INFILTRATION SYSTEM (STORMTRAP) PER TYPICAL DETAILS, SHEETS CG-502 & 503 (INVERT @ 4951.33)
- INSTALL 12" CHECK VALVE (STORMWATER INTENDED TO FLOW WEST TO EAST ONLY)
- CONSTRUCT 12" SIDEWALK CULVERT PER TYPICAL SECTION, SHEET CG-501
- INSTALL 12" PVC SDR-35 STORM DRAIN
- MATCH EXISTING CONCRETE SIDEWALK GRADE
- MATCH EXISTING ASPHALT PAVEMENT GRADE
- CONSTRUCT 4" DIAMETER STORM DRAIN MANHOLE PER TYPICAL DETAILS, SHEET CG-501
- NOT USED
- INSTALL 4" PVC SDR-35 STORM DRAIN PIPE
- NOT USED
- INSTALL 4"x12" REDUCER
- INSTALL 4" 90 DEGREE WYE WITH SINGLE CLEANOUT TO GRADE
- INSTALL 4"x12" 90 DEGREE WYE WITH SINGLE CLEANOUT TO GRADE
- INSTALL DOUBLE CLEANOUT TO GRADE, CONNECT TO BUILDING ROOF DRAIN (FOR CONTINUATION, SEE PLUMBING PLAN)
- INSTALL 12" 90 DEGREE WYE
- INSTALL 12" 90 DEGREE WYE WITH SINGLE CLEANOUT TO GRADE
- INSTALL 12" 45 DEGREE BEND
- INSTALL 6" PVC SDR-35 STORM DRAIN PIPE
- INSTALL 6"x12" 90 DEGREE WYE WITH SINGLE CLEANOUT TO GRADE
- CONNECT 12" STORM DRAIN TO SUBSURFACE STORAGE SYSTEM
- CONSTRUCT 6" TALL HEADER CURB AROUND NORTH, WEST, AND SOUTH SIDES OF NEW SINGLE 'D' STORM DRAIN (OVERFLOW), TOP OF CURB 61.15.

**NOTE:**

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THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON A BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 09/05/2023 (2022.066.2) AND THE PLAT OF LOTS 1-B-1 AND 1-B-2 FREEWAY-OLDTOWN, LIMITED RECORDED 3/11/24. THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 09/05/2023 (2022.066.2).



SCALE: 1" = 20'



**HIGH MESA** a Bowman company  
6010-B Midway Park Blvd. NE, Albuquerque, NM 87109  
P:505.345.4250 [highmesacg.com](http://highmesacg.com) | [bowman.com](http://bowman.com)

2023.057.1







SPEC. KEY	DESCRIPTION
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SPEC. KEY	DESCRIPTION
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**STORMTRAP MODULE LIFTING SPECIFICATION**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL (A) CHAIN/CABLES ARE SECURED PROPERLY TO THE LIFTING ANCHORS AND IN EQUAL TENSION WHEN LIFTING THE STORMTRAP MODULE.
- MINIMUM 7'-0" CHAIN/CABLE LENGTH TO BE USED TO LIFT STORMTRAP MODULES (SUPPLIED BY CONTRACTOR).
- CONTRACTOR TO ENSURE MINIMUM LIFTING ANGLE IS 60° FROM TOP SURFACE OF STORMTRAP MODULE. SEE DETAIL.
- IF IT IS UNDERSTOOD AND AGREED THAT AT ALL TIMES DURING WHICH HOISTING AND MOVING EQUIPMENT IS BEING SUPPLIED TO THE PURCHASER, OPERATOR OF SUCH EQUIPMENT SHALL BE IN CHARGE OF ITS ENTIRE OPERATION AND SHALL AT ALL TIMES BE THE HOLDER OF THE SHUTTLE AND PROPERTY OF ANY SUGGESTION TO PUT FROM THE SLIDER, ITS ADVISE OR EMPLOYEES, PURCHASER DIRECT TO THE PROVIDER OF SUCH SERVICES. DAMAGES RESULT FROM ALL USE, CLAIMS, DEMANDS OR CAUSES OF ACTION, WHICH MAY ARISE FROM THE EXISTENCE OR OPERATION OF SAID EQUIPMENT.

**END PANEL CONNECTION ELEVATION VIEW**

CONNECTION HOOK PROVIDED BY  
STORMTRAP AND INSTALLED BY  
CONTRACTOR (SEE DETAIL G)

1" x 1/4" STEEL PLATE FOR  
HOOK CONNECTION; CONTRACTOR  
TO SEAL TOP INSTALLATION

SIDE OF STORMTRAP MODULE

SIDE OF END PANEL

**STEP 1**

**STEP 2**

**DETAIL G**

**StormTrap**  
WORKS WITH ANY PERIMETER JOINT PANEL

**120° WEATHER PROOFING CHANNEL - 1.5" X .063"**  
PARTS-661-654 / 1-313-3131-5547

**ENGINEER INFORMATION:**  
DesignLab Self Registration

Romeville, IL

**PROJECT INFORMATION:**  
Brilliant  
Early Learning Center

Albuquerque, NM

**CURRENT ISSUE DATE:**  
12/15/2023

**ISSUED FOR:**

REV.	DATE	ISSUED FOR	BY

Δ 12/15/2023 PRELIMINARY DM

SCALE:  
= 1/8" = 1'

**SHEET TITLE:**

SINGLETRAP  
INSTALLATION  
SPECIFICATION

**SHEET NUMBER:**

**31**

[illegible]

**ACCESS OPENING SPECIFICATION**

- A TYPICAL ACCESS OPENING FOR STORMTRAP SYSTEM ARE 3'-0" IN DIAMETER WITH AN ACCESS OPENING LARGER THAN 4'-0" IN DIAMETER NEED TO BE APPROVED BY STORMTRAP. ALL ACCESS OPENINGS SHOULD BE AT LEAST 2'-0" FROM THE EDGE OF THE ROOF OR DECK. IF THE ACCESS IS NOT LOCATED ON THE CORNER OR OTHERWISE ALL ACCESS OPENINGS TO BE LOCATED ON INDICES LOS UNLESS OTHERWISE SPECIFIED. SEE SHEET FOR STEP DETAIL AND LOCATIONS.
- UNLESS OTHERWISE SPECIFIED, PLASTER COATED STEEL STEPS PRODUCED BY W.A. INDUSTRIAL SHALL BE USED FOR ALL APPLICATIONS. THE FIRST STEP OF ANY PROVIDED INSIDE AIR MODULE WHEN REQUIRED NECESSARY, THE HIGHEST STEP IN THE DOWNSTAIRS RISE SHALL BE USED AS A REFERENCE POINT FOR THE LOCATION OF THE STORMTRAP MODULES. ALL EXISTING STEPS SHALL BE PLACED AT A DISTANCE BETWEEN 1'-0" MAX AND 1'-4" MAX BETWEEN THEM. STEPS MAY BE MODIFY OR ALTERED TO ALLOW OPENINGS OR OTHER IRREGULARITIES IN THE MODULE.
- STORMTRAP LIFTING HOISTS MUST BE LOCATED TO ALLOW INTERFERENCE WITH ACCESS OPENINGS OR THE CENTER OF GRAVITY OF THE MODULE AS NEEDED.
- STORMTRAP ACCESS OPENINGS MAY BE RELOCATED TO ALLOW INTERFERENCE WITH INFLET AND/OR OUTLET PIPE OPENINGS SO PLACEMENT OF STEPS IS ATTAINABLE.
- ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST TWO ACCESS OPENINGS PER SYSTEM FOR ACCESS AND INSPECTION.
- USE PRECAST ADJUSTING BRICKS OR REDUCES TO MEET SHARP STORMTRAP RECOMMENDATIONS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE SECTIONS. (PROVIDED BY OTHER)

**STEP DETAIL**

\*\*\* NOTE \*\*\*

DUE TO CURRENT INCONSISTENCIES IN THE 16" STEP SUPPLY, STORMTRAP WILL SUBSTITUTE THE 16" STEP WITH THE 20" STEP ALTERNATING LENGTH STEP UNTIL THE SUPPLY CHAIN ISSUE IS RESOLVED.

DATE: 03-26-2022

**RISER/STAIR DETAIL**

FRAGE & ANSWER  
 GEFÄHRETE DURCH VERBREMSE  
 (GEFÄHRETE DURCH VERBREMSE)  
 PRECAST CONCRETE ADJUSTING BRICKS OR REDUCES TO MEET SHARP STORMTRAP RECOMMENDATIONS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE SECTIONS. (PROVIDED BY OTHER)

**Pipe Opening Specification**

- MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'-0".
- CONNECTING PIPES MAY BE INSTALLED WITH A 1'-0" CONCRETE COLLAR AND AN AGGREGATE CRACK (AS REQUIRED) ON AT LEAST ONE PIPE LENGTH (SEE PIPE CONNECTION DETAIL). A STRUCTURAL GRADE CONCRETE OR HIGH STRENGTH, NON-SHRINK GROUT WITH A MINIMUM 8 DAY COMPRESSIVE STRENGTH OF 3000 PSI MAY BE USED.
- THE ANGULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH-STRENGTH NON-SHRINK GROUT.

**PIPE INSTALLATION INSTRUCTIONS**

- CLEAN AND LUBRICATE ALL PARTS OF THE PIPE TO BE INSERTED INTO STORMTRAP.
- IF THE PIPE IS OLD, CARE SHOULD BE TAKEN TO AVOID NO SHARP EDGES. REVEL AND LUBRICATE LEAD END OF PIPE.
- ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

NOTE: ALL AUXILIARY PRODUCTS/PREFINITIONS RECOMMENDED AND SHOWN ON THIS SHEET INCLUDING BUT NOT LIMITED TO CONCRETE COLLARS, AGGREGATE CRACKLES, AGGREGATE CRACKS, RISER SECTIONS, ETC., ARE RECOMMENDATIONS ONLY AND SUBJECT TO CHANGE PER THE INSTALLING CONTRACTOR AND/OR PER LOCAL MUNICIPAL CODE REQUIREMENTS.

**NOTCHED PIPE CONNECTION DETAIL**

WHEN PIPE ENTERS FROM BELOW

**INVERT OF STORMTRAP SYSTEM**

IF A PIPE IS PROPOSED AT THE SAME LEVEL AS THE INVERT OF THE STORMTRAP, IT IS ALLOWED TO PASS OVER TO WEIR.

**ENGINEER INFORMATION:**

Design/In St Registration

Romeville, IL

**PROJECT INFORMATION:**

Briarton Early Learning Center

Albany, NM

**CURRENT ISSUE DATE:**

12/15/2023

**ISSUED FOR:**

[ ]

**REV. DATE / ISSUED FOR:**

12/15/2023 [ ]

**SCALE:**

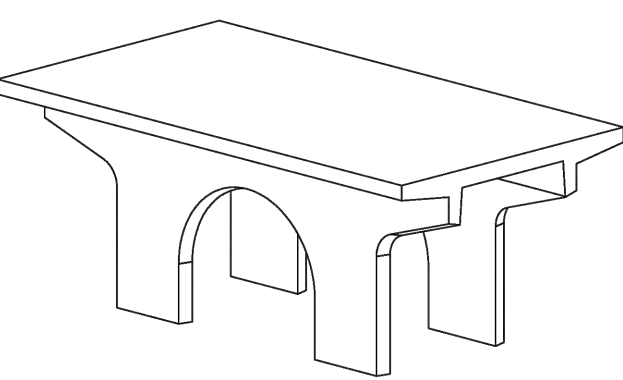
1" = 8'

**SHEET TITLE:**

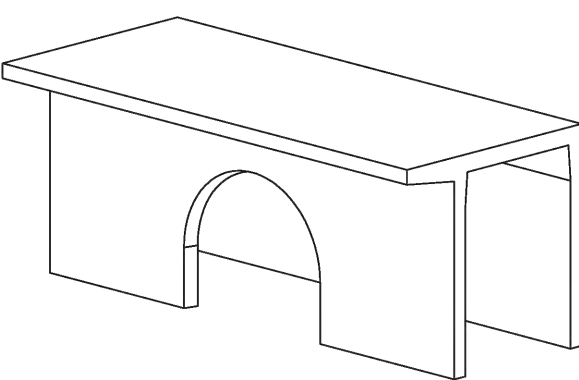
PIPE / ACCESS OPENING SPECIFICATION

**SHEET NUMBER:**

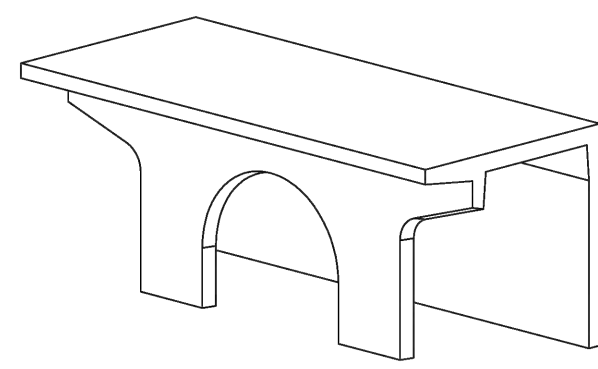
50



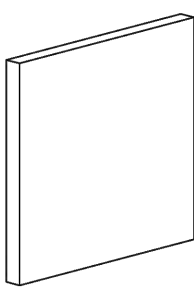
TYPE I



TYPE IV



TYPE III



TYPE IV END PANEL

**NOTES:**

1. OPENING LOCATIONS AND SHAPES MAY VARY.

2. SP - INDICATES A MODULE WITH MODIFICATIONS.

**StormTrap**  
www.stormtrap.com/projectmanagement

1307 WILSON PARKWAY  
 FARMVILLE, IL 60440  
 815-441-6040 / 815-441-6040

**ENGINEER INFORMATION:**  
 DesignLab Self  
 Registration

Romeoville, IL

**PROJECT INFORMATION:**  
 Brillante!  
 Early Learning  
 Center

Albuquerque, NM

**CURRENT ISSUE DATE:**  
 12/15/2023

**ISSUED FOR:**


REV.	DATE:	ISSUED FOR:	BY	DATE

☒ 12/15/2023 PRELIMINARY ☐ OK

**SCALE:**  
☐ N/A

**SHEET TITLE:**

SINGLETRAP  
 MODULE TYPES

**SHEET NUMBER:**

60

BRILLANTE! EARLY  
LEARNING CENTER

1005-B 18th St NW  
ALBUQUERQUE, NM 87104

ALBUQUERQUE, NM 87104  
MODELED BY  
J.Y.R.

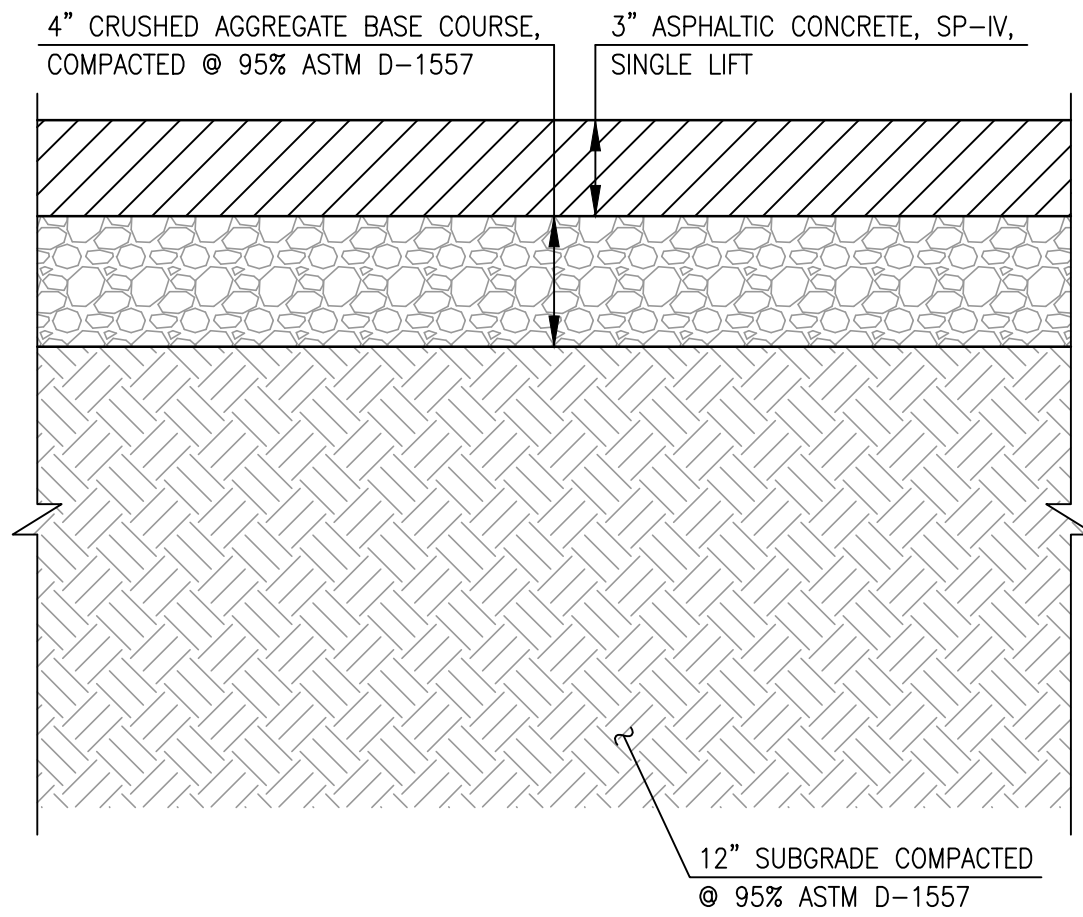
DESIGN PHASE

SHEET NUMBER



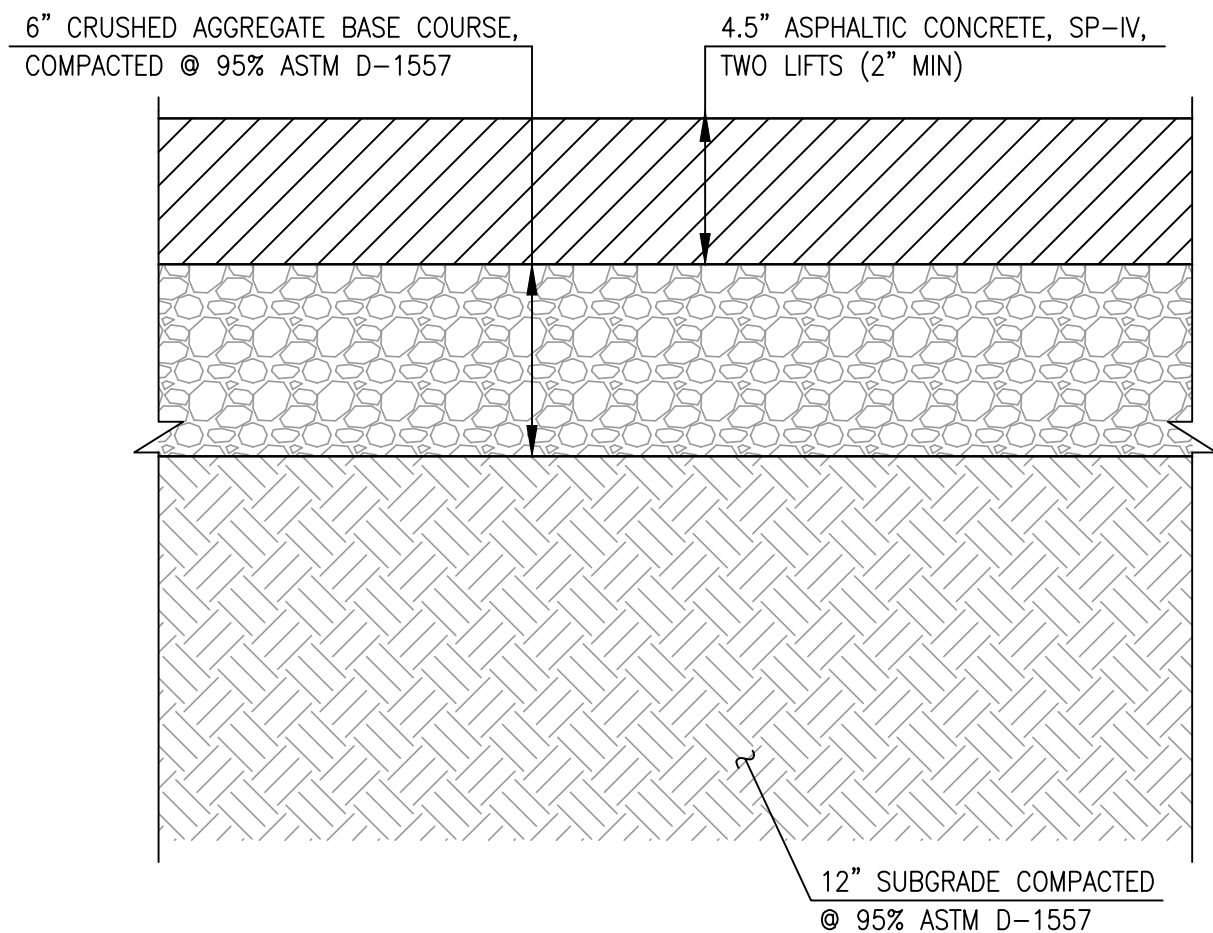
SPECIFICATION KEYED NOTES

SPEC. KEY	DESCRIPTION
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TYPICAL 3" ASPHALT PAVING SECTION

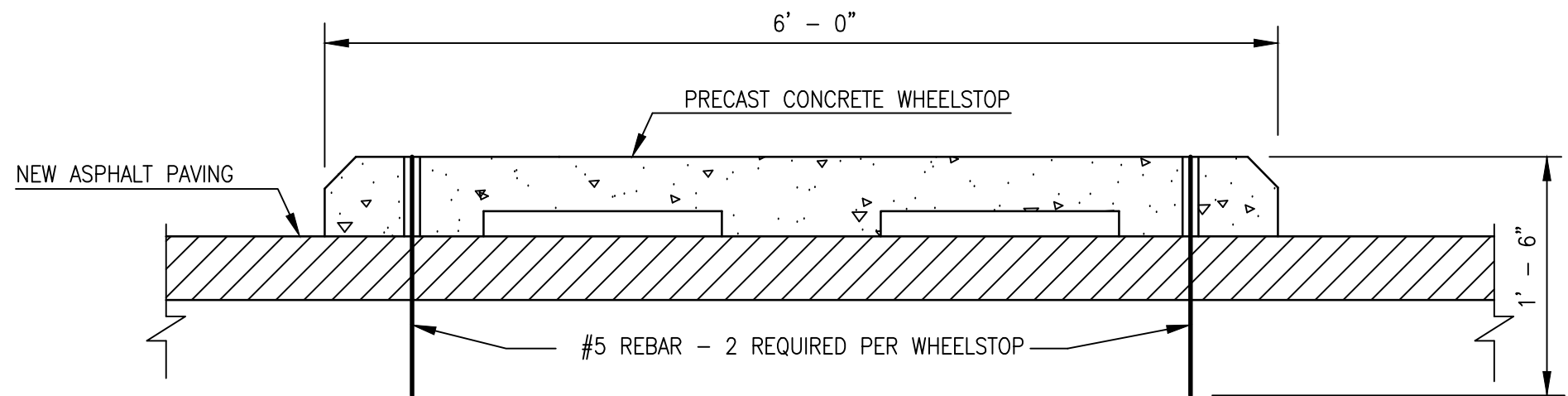
SCALE: 1" = 0'-5"



TYPICAL 4.5" ASPHALT PAVING SECTION

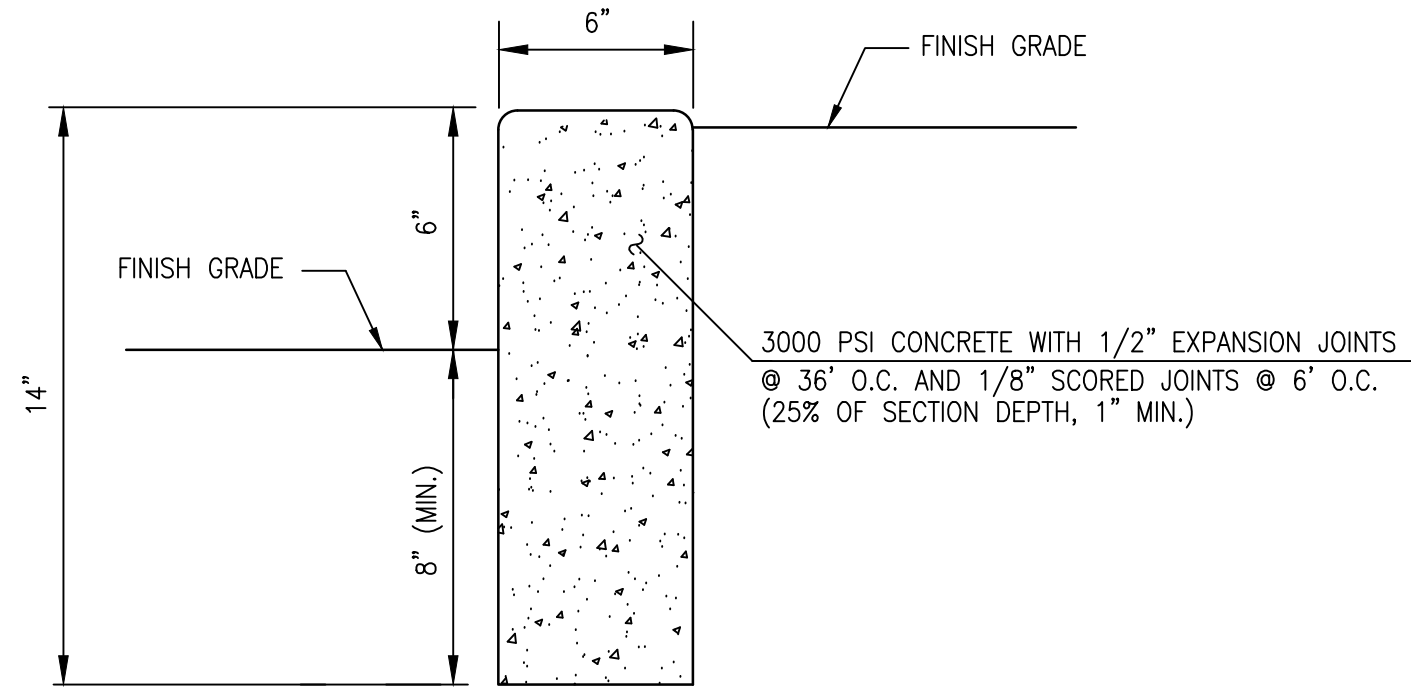
(HEAVY DUTY AREAS)

SCALE: 1" = 0'-5"



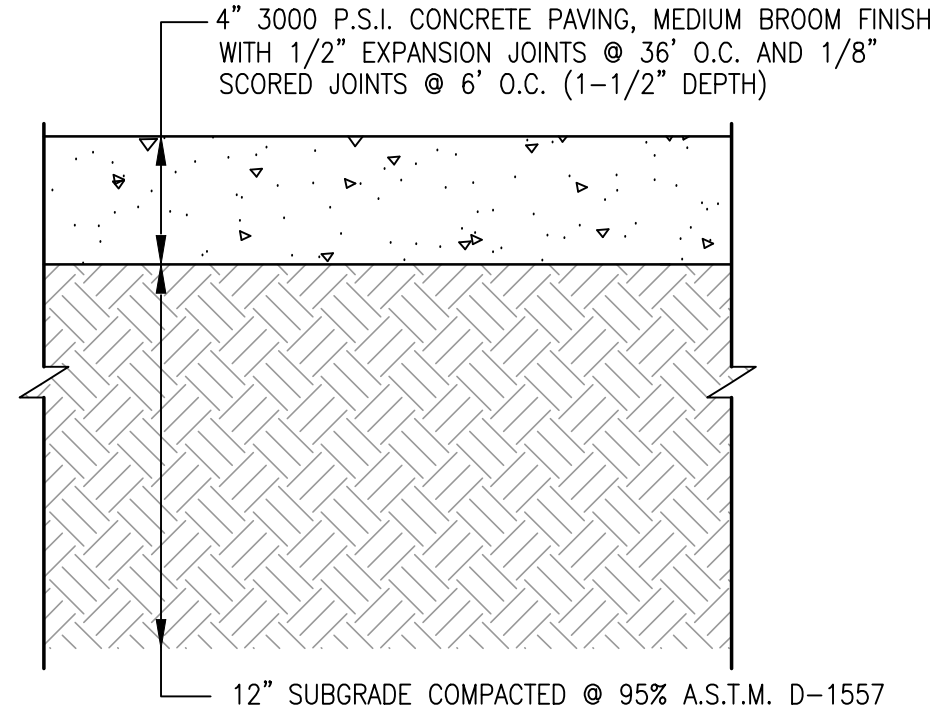
WHEELSTOP SECTION

SCALE: 1" = 0'-6"



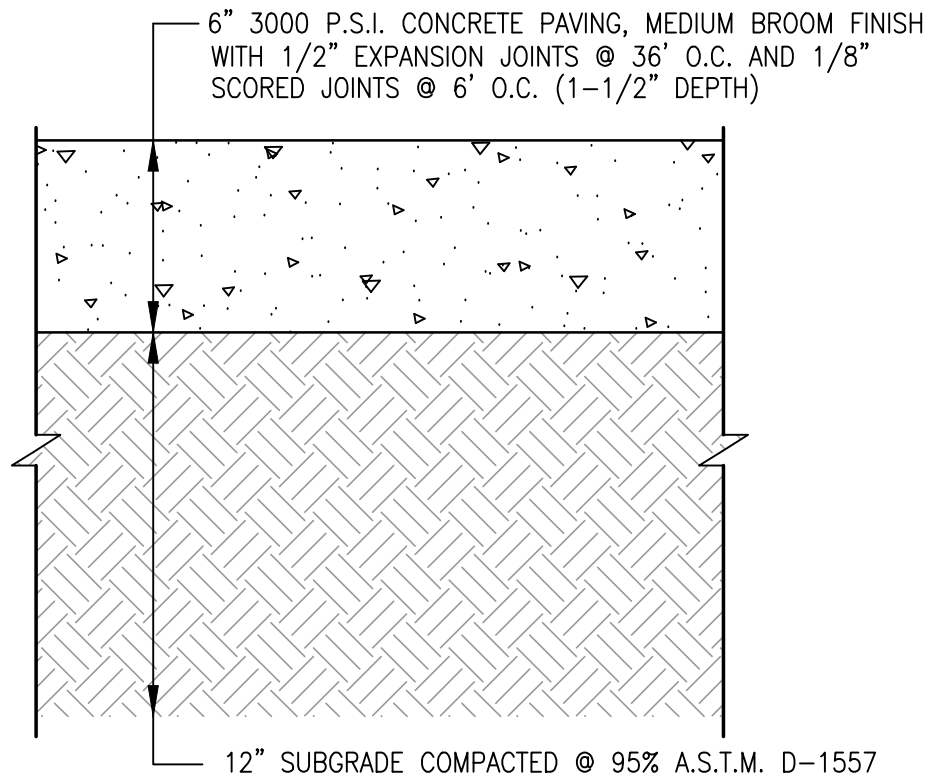
TYPICAL HEADER CURB SECTION

N.T.S.



TYPICAL CONCRETE SIDEWALK SECTION

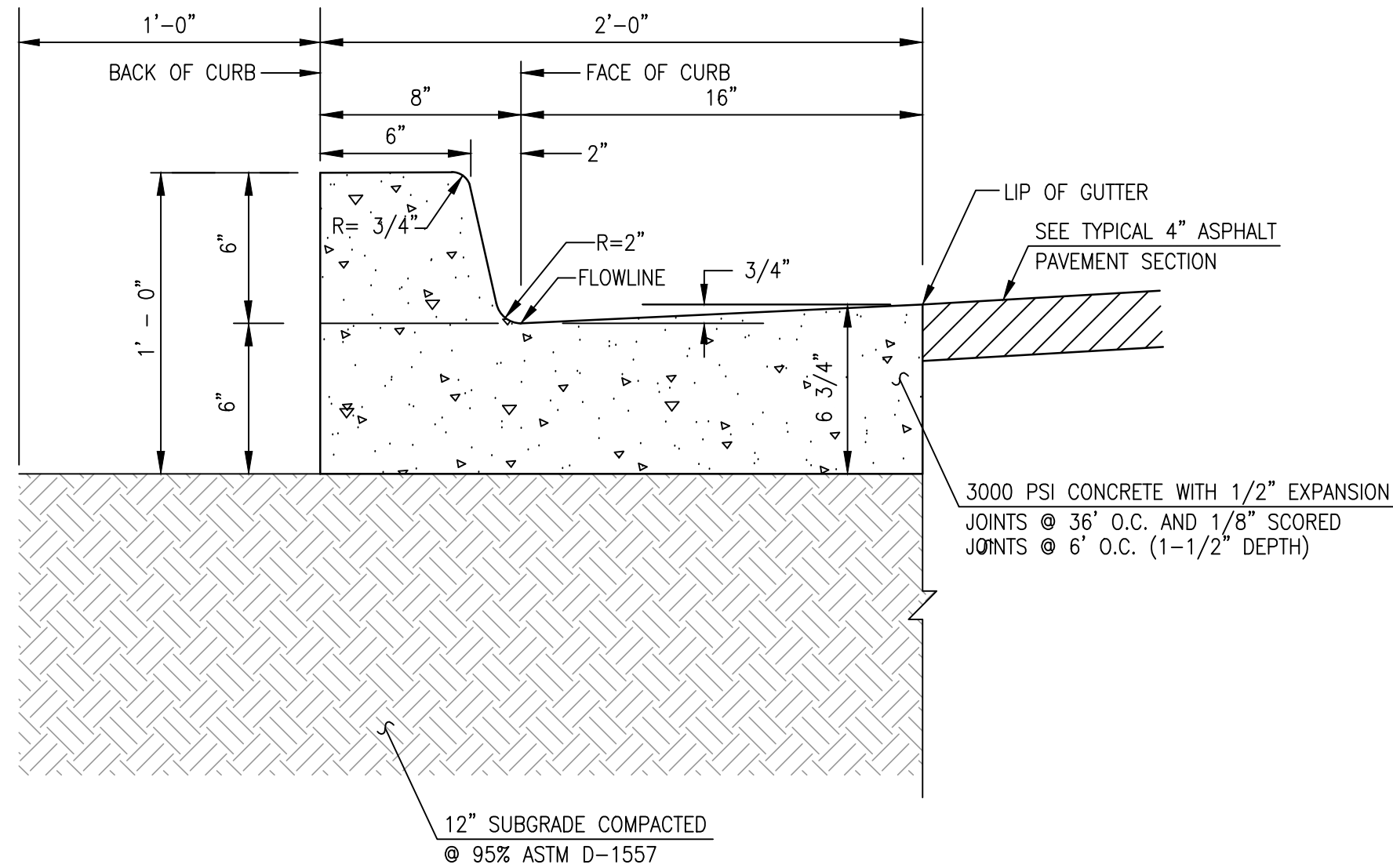
SCALE: 1" = 0'-6"



TYPICAL CONCRETE PAVEMENT SECTION

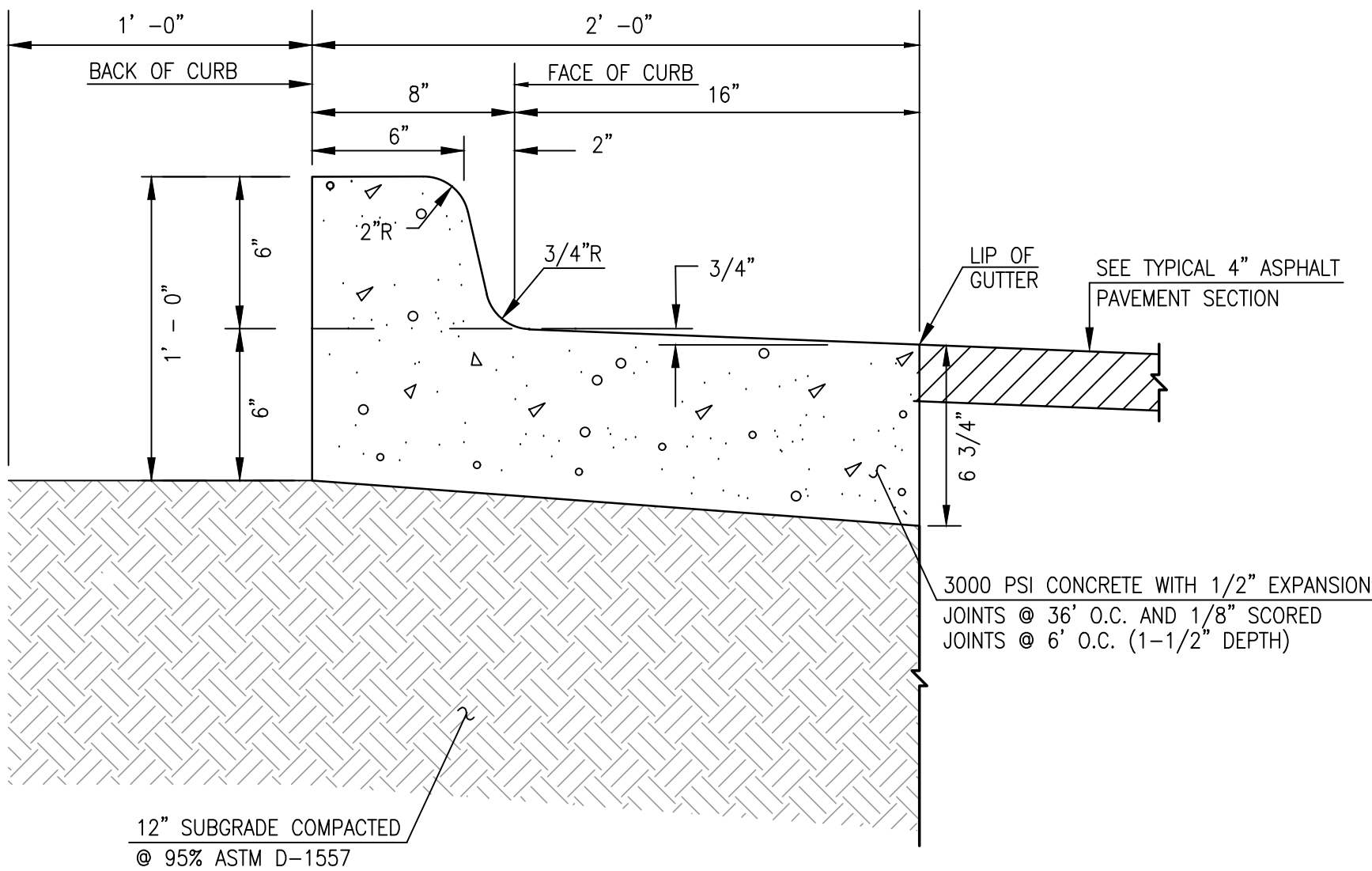
(HEAVY DUTY)

SCALE: 1" = 0'-6"



TYPICAL SIX-INCH CURB & GUTTER

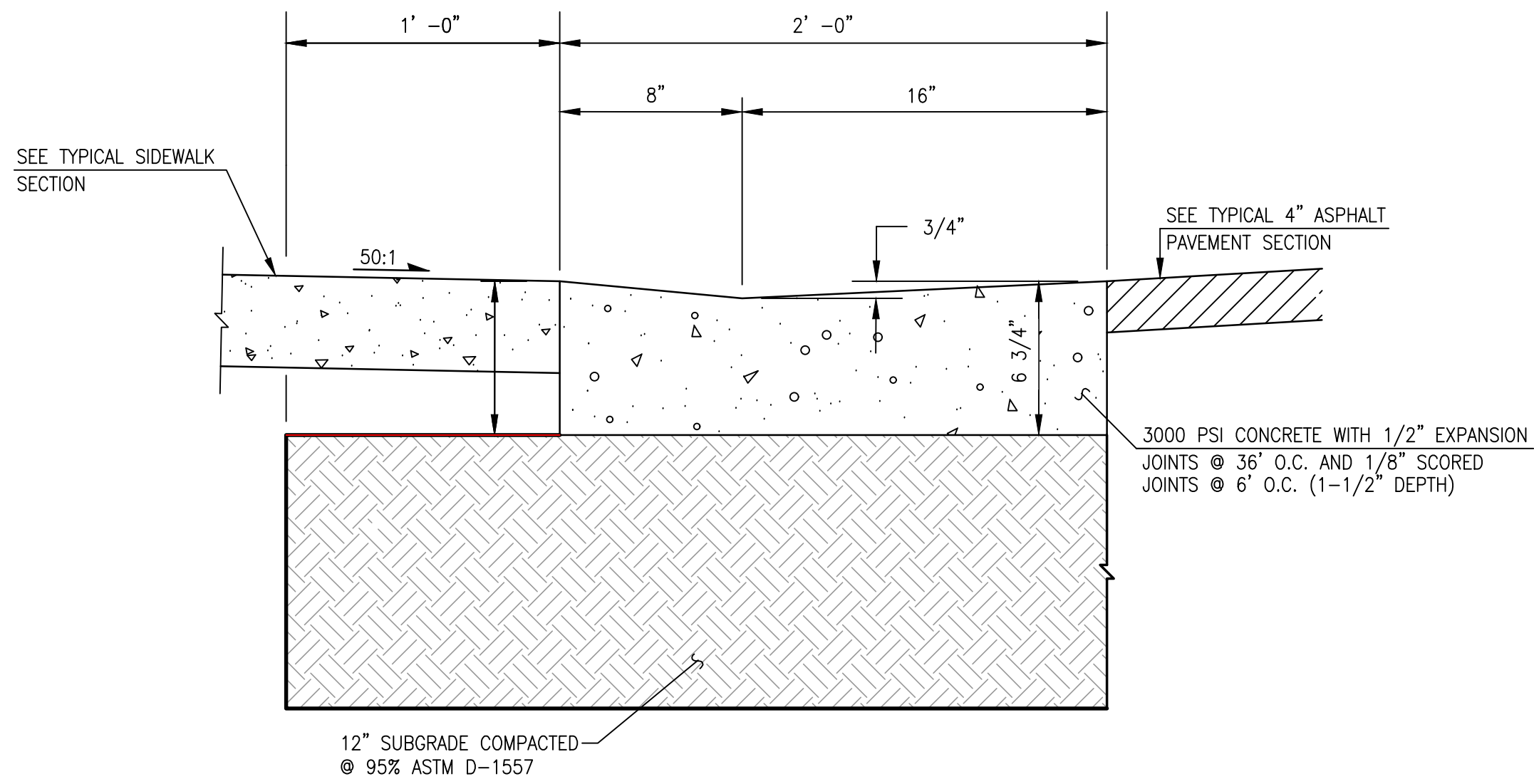
SCALE: 1" = 0'-6"



TYPICAL SIX-INCH DEPRESSED CURB AND GUTTER

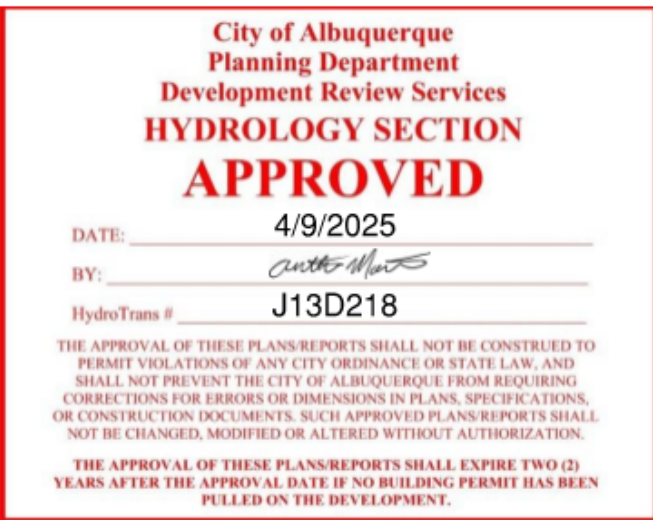
SCALE: 1" = 0'-6"

NOTE: USE THIS SECTION FOR CASES WHERE PAVING SLOPES AWAY FROM FACE OF CURB



TYPICAL FLUSH CURB & GUTTER

SCALE: 1" = 0'-6"



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2023.057.1

NO.	ISSUE	DATE
PROJECT	7011.95 CITY OF ALBUQUERQUE BRILLANTE! EARLY LEARNING CENTER	SCALE
DESIGN PHASE	100% CONSTRUCTION DOCUMENTS	RMKM PROJECT NO. 2301 - 7011.95
SHEET NUMBER	CP-501	PROJECT MANAGER G.M.
		MODELED BY J.Y.R.

SHEET TITLE  
PAVING SECTIONS AND  
DETAILS



CP-501

02-28-2025