

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

April 13, 2022

Patrick Sisneros, P.E.
Bohannon Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

**RE: Balloon Fiesta Park Bus Depot
Grading and Drainage Plans
Engineer's Stamp Date: 03/23/22
Hydrology File: B17D001G**

Dear Mr. Sisneros:

Based upon the information provided in your submittal received 03/23/2022, the Grading & Drainage Plans are approved for Grading Permit and Paving Permit. Once the grading and paving of the project is complete, please provide an as-built for the City's records since there is no CO attached to the project.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Other Contact: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF DEVELOPMENT: _____ **PLAT (# of lots)** _____ **RESIDENCE** _____ **DRB SITE** _____ **ADMIN SITE** _____

IS THIS A RESUBMITTAL? _____ **Yes** _____ **No** _____

DEPARTMENT _____ **TRANSPORTATION** _____ **HYDROLOGY/DRAINAGE** _____

Check all that Apply:

TYPE OF SUBMITTAL:

- _____ ENGINEER/ARCHITECT CERTIFICATION
- _____ PAD CERTIFICATION
- _____ CONCEPTUAL G & D PLAN
- _____ GRADING PLAN
- _____ DRAINAGE REPORT
- _____ DRAINAGE MASTER PLAN
- _____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- _____ ELEVATION CERTIFICATE
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ TRAFFIC IMPACT STUDY (TIS)
- _____ STREET LIGHT LAYOUT
- _____ OTHER (SPECIFY) _____
- _____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- _____ BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY
- _____ PRELIMINARY PLAT APPROVAL
- _____ SITE PLAN FOR SUB'D APPROVAL
- _____ SITE PLAN FOR BLDG. PERMIT APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ SIA/ RELEASE OF FINANCIAL GUARANTEE
- _____ FOUNDATION PERMIT APPROVAL
- _____ GRADING PERMIT APPROVAL
- _____ SO-19 APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ GRADING/ PAD CERTIFICATION
- _____ WORK ORDER APPROVAL
- _____ CLOMR/LOMR
- _____ FLOODPLAIN DEVELOPMENT PERMIT
- _____ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
HYDROLOGY DEVELOPMENT SECTION

**WAIVER APPLICATION FROM STORMWATER
QUALITY VOLUME MANAGEMENT ON-SITE**

GENERAL INFORMATION

APPLICANT: Patrick Sisneros DATE: 03/22/2022
DEVELOPMENT: Balloon Fiesta Park Bus Depot
LOCATION: 9401 Balloon Fiesta Pkwy NE, Albuquerque, NM 87113

STORMWATER QUALITY POND VOLUME

Per the DPM Article 6-12 - Stormwater Quality and Low-Impact Development, the calculated sizing for required Stormwater Quality Pond volume is equal to the impervious area draining to the BMP multiplied by 0.42 inches for new development sites and by 0.26 inches for redevelopment sites.

The required volume is 7482 cubic feet

The provided volume is 4705 cubic feet

The deficient volume is 2777 cubic feet

WAIVER JUSTIFICATION

Per the DPM Article 6-12(C), private off-site mitigation and payment-in-lieu may only be considered if management on-site is waived in accordance with the following criteria and procedures.

1. Management on-site shall be waived by the City Engineer if the following conditions are met:

- a. Stormwater quality can be effectively controlled through private off-site mitigation or through an arrangement (approved by the City) to use a cooperator's existing regional stormwater management infrastructure or facilities that are available to control stormwater quality.
 - b. Any of the following conditions apply:
 - i. The lot is too small to accommodate management on site while also accommodating the full plan of development.
 - ii. The soil is not stable as demonstrated by a geotechnical report certified by a professional engineer licensed in the State of New Mexico.
 - iii. The site use is inconsistent with the capture and reuse of stormwater.
 - iv. Other physical conditions exist where compliance with on-site stormwater quality control leaves insufficient area.
 - v. Public or private off-site facilities provide an opportunity to effectively accomplish the mitigation requirements of the Drainage Ordinance (Part 14-5-2 ROA 1994) as demonstrated on as-built construction drawings and an approved drainage report.
 - vi. The developer constructs a project to replenish regional groundwater supplies at an off-site location.
 - vii. A waiver to State water law or acquisition of water rights would be required in order to implement management on site.
2. The basis for requesting payment-in-lieu or private off-site mitigation is to be clearly demonstrated on the drainage plan.

This project's justification: The site is a redevelopment of existing paved (asphalt/ base course) areas.

The site has incorporated first flush BMPs to the fullest extent possible. The intended site use, as a bus depot,
is inconsistent with the capture and reuse stormwater (point 1,b,iii). Furthermore, the existing site conditions leave
insufficient area for on-site stormwater quality control of the fully re-developed area (point 1,b,iv).



Professional Engineer or Architect

PAYMENT-IN-LIEU

Per the DPM Article 6-12(C)(1), the amount of payment-in-lieu is deficient volume (cubic feet) times \$6 per cubic feet for detached single-family residential projects or \$8 per cubic feet for all other projects.

AMOUNT OF PAYMENT-IN-LIEU = \$ _____

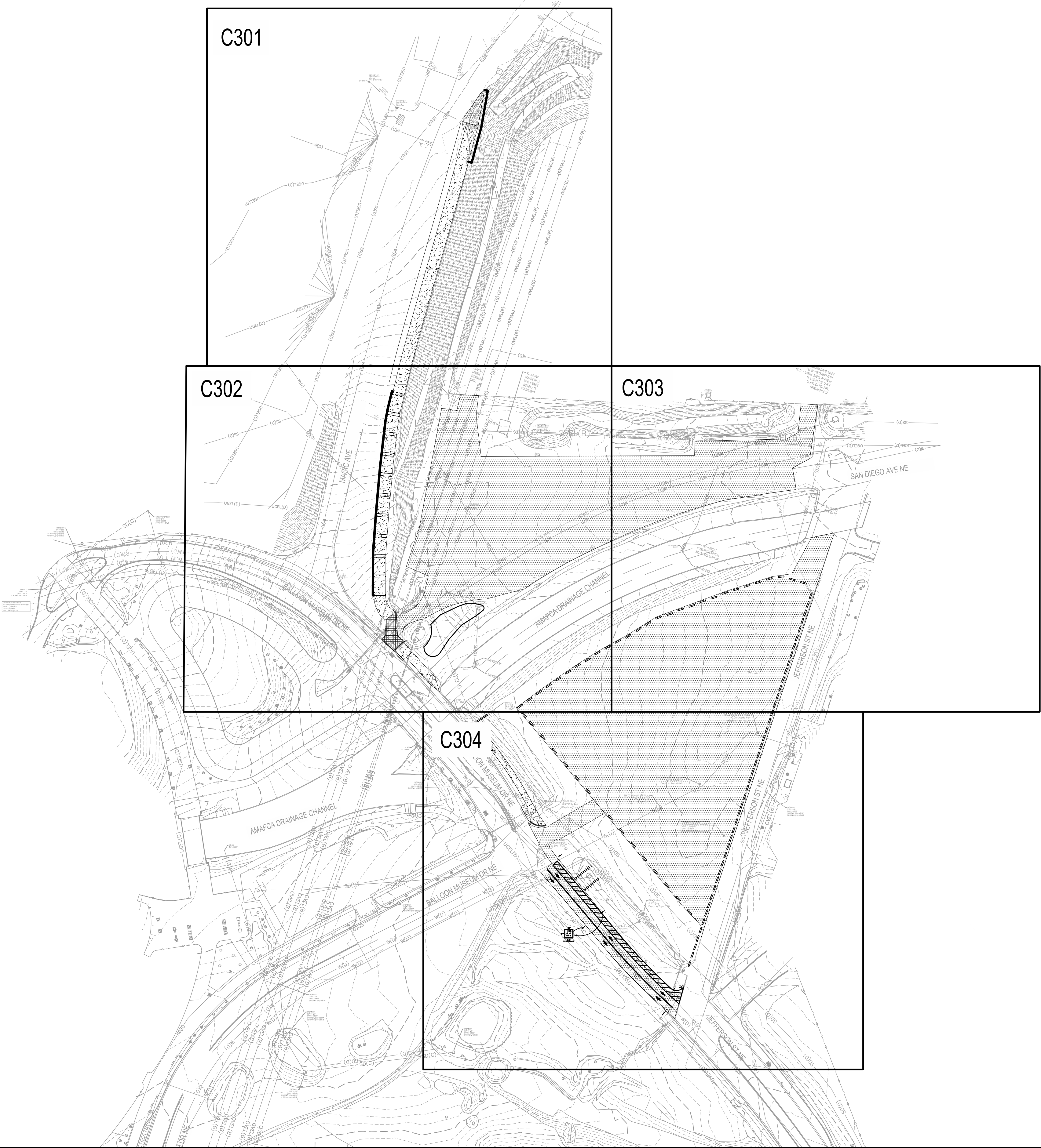
THIS SECTION IS FOR CITY USE ONLY

☒ Waiver is approved. The amount of payment-in-lieu from above must be paid prior to Certificate of Occupancy.

☐ Waiver is DENIED.

Renée C. Brissette

City of Albuquerque
Hydrology Section



GRADING NOTES

A. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

B. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.

C. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION". ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT, (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).

D. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.

E. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

F. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.

G. A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL OR BORROW SITE AND HAUL TO OR FROM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

H. PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.

I. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

NOTE:
POND SIDE SLOPES NEED TO BE STABILIZED WITH NATIVE GRASS SEED (PER CITY SPEC 1012) WITH AGGREGATE MULCH OR EQUAL (MUST SATISFY THE "FINAL STABILIZATION CRITERIA" CGP 2.2.14.B.).

NOTE:
SIDEWALK CROSS-SLOPES SHALL BE AT A MINIMUM OF 1.0% AND A MAXIMUM OF 2.0%.

NOTE:
CONTRACTOR SHALL PROVIDE AS-BUILT GRADING INFORMATION STAMPED BY A PROFESSIONAL SURVEYOR. AS-BUILT INFORMATION REQUIRED SHALL BE COORDINATED WITH THE ENGINEER AND SHALL BE SUFFICIENTLY DETAILED TO VERIFY THAT THE DRAINAGE WILL FUNCTION IN ACCORDANCE WITH THE DESIGN. AS-BUILT DATA SHALL BE PROVIDED AT LEAST 5 WORKING DAYS PRIOR TO CONTRACTOR'S REQUEST FOR PERMANENT CERTIFICATE OF OCCUPANCY. AT A MINIMUM, AS-BUILTS DATA SHALL INCLUDE:

- ALL GRATES AND INVERTS OF CATCH BASINS
- APPROXIMATELY 75% OF ALL DESIGN SPOT ELEVATIONS & FINISHED FLOOR ELEVATIONS.



GENERAL NOTES

A. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.

B. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.

C. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

D. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.

E. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.

F. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.

G. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

H. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.

I. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).

J. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.

K. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE BERNALILLO COUNTY, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

L. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.

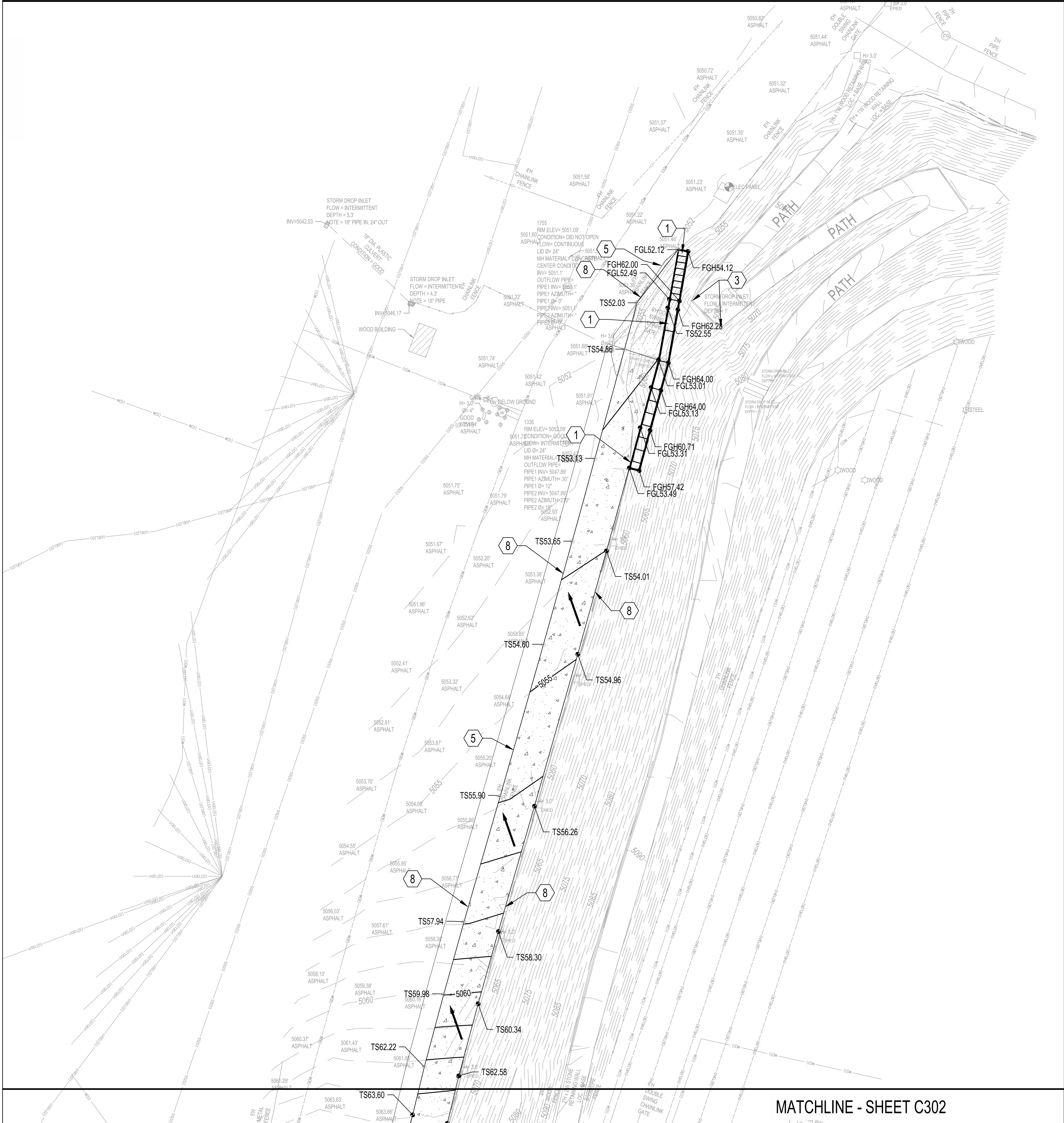
M. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES.

N. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

BENCH MARKS SEE EXISTING CONDITIONS SHEETS FOR BENCHMARK INFORMATION	
ENGINEER'S SEAL 	
AS-BUILT INFORMATION	
BY	DATE
CONTRACTOR	DATE
WORK STAGED BY	DATE
INSPECTORS ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE
REVISIONS	
NO.	DATE
DESIGN	PS
DESIGNED BY	AMP
CHECKED BY	JN
DRAWN BY	
BHI PROJECT NO. 20210318	
DWG NO. C300	
SHEET 20 OF 25	

BALLOON FIESTA PARK BUS DEPOT OVERALL GRADING PLAN





GRADING KEYED NOTES

1. INSTALL RETAINING WALL. CONTRACTOR TO COORDINATE WITH RED-ROCK OR AN APPROVED EQUAL MANUFACTURER TO PROVIDE STAMPED AND SIGNED STRUCTURAL DRAWINGS FOR THE DESIGN OF THE WALL. WALL DESIGN TO MATCH PROPOSED GRADING ON GRADING PLANS AND INCORPORATE DRAINAGE SYSTEM PER MANUFACTURER. WALL DESIGN TO ALSO INCORPORATE FENCING AS SPECIFIED ON THE LANDSCAPE ARCHITECT'S PLANS. PER OWNER'S REQUEST, WALL TYPE/COLOR TO MATCH REDI-ROCK KINGSTONE OR APPROVED EQUAL. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIALS.
 2. INSTALL RAMP AND LANDSCAPE WALL. CONTRACTOR TO COORDINATE WITH RED-ROCK OR AN APPROVED EQUAL MANUFACTURER TO PROVIDE STAMPED AND SIGNED STRUCTURAL DRAWINGS FOR THE DESIGN OF THE WALL. WALL DESIGN TO MATCH PROPOSED GRADING ON GRADING PLANS AND INCORPORATE DRAINAGE SYSTEM PER MANUFACTURER. WALL DESIGN TO ALSO INCORPORATE FENCING AS SPECIFIED ON THE LANDSCAPE ARCHITECT'S PLANS. PER OWNER'S REQUEST, WALL TYPE/COLOR TO MATCH REDI-ROCK KINGSTONE OR APPROVED EQUAL. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIALS.
 3. EXISTING FEATURE. PROTECT IN PLACE.
 4. EXISTING DRAINAGE FEATURE. PROTECT IN PLACE.
 5. LIMITS OF PAVING.
 6. INSTALL STONE CHECK DAM PER DETAIL 6/ C400.
 7. EXISTING INLET. PROTECT IN PLACE.
 8. LIMITS OF GRADING.
 9. ADJUST MANHOLE /VALVE CAN TO PROPOSED GRADE.
- * NOT ALL KEYED NOTES USED ON THIS SHEET.

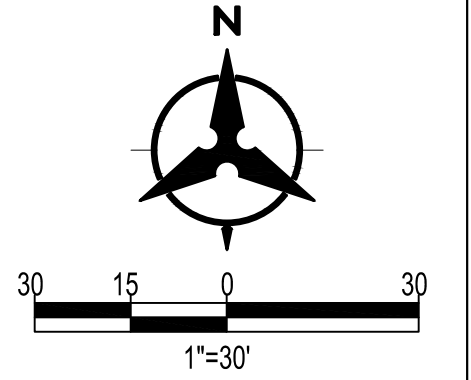
GRADING LEGEND

- --- PROPERTY LINE
- 95.40 PROPOSED SPOT ELEVATION
TC=TOP OF CURB
FL=LOW LINE
TOC=TOP OF CONCRETE
TS=TOP OF SIDEWALK
TG=TOP OF GRATE
FG=FINISHED GRADE
FGH=FINISHED GRADE HIGH
FGL=FINISHED GRADE LOW
INV=INVERT
TP=TOP OF POND
BP=BOTTOM OF POND
- 4960 --- EXISTING INDEX CONTOUR
--- 4959 --- EXISTING INTERMEDIATE CONTOUR
--- 4960 --- PROPOSED INDEX CONTOUR
--- 4959 --- PROPOSED INTERMEDIATE CONTOUR
- DIRECTION OF FLOW
- --- APPROXIMATE EASEMENT
- ⊙ PROPOSED STORM DRAIN MANHOLE
- ⊙ PROPOSED STORM DRAIN INLETS
- ⊙ PROPOSED STORM DRAIN CAP

Bohannon **Huston**
www.bhinc.com 800.877.5332

BALLOON FIESTA PARK BUS DEPOT GRADING PLAN

BHI PROJECT NO. 20210318 DWG NO. C301 SHEET 21 OF 25



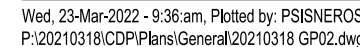
BENCH MARKS					
SEE EXISTING CONDITIONS SHEETS FOR BENCHMARK INFORMATION					

ENGINEER'S SEAL



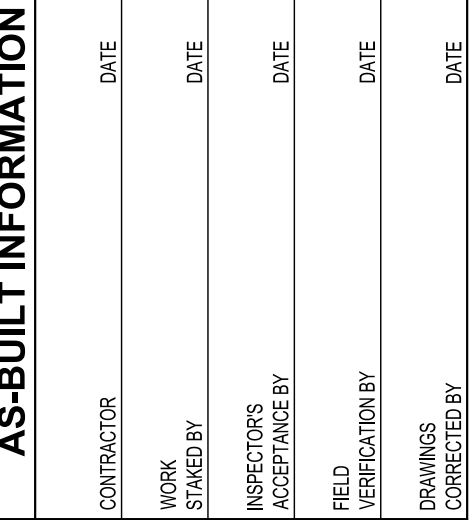
AS-BUILT INFORMATION		REVISIONS	
CONTRACTOR	DATE	BY	DATE

DESIGN		PS		AMP		JN	
DESIGNED BY				CHECKED BY		DRAWN BY	



NOTE:
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	DESIGN
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BALLOON FIESTA PARK BUS DEPOT GRADING PLAN

BHI PROJECT NO.	DWG NO.	SHEET	OF
20210318	C302	22	25

City of Albuquerque
Planning Department
Development Review Services

HYDROLOGY SECTION

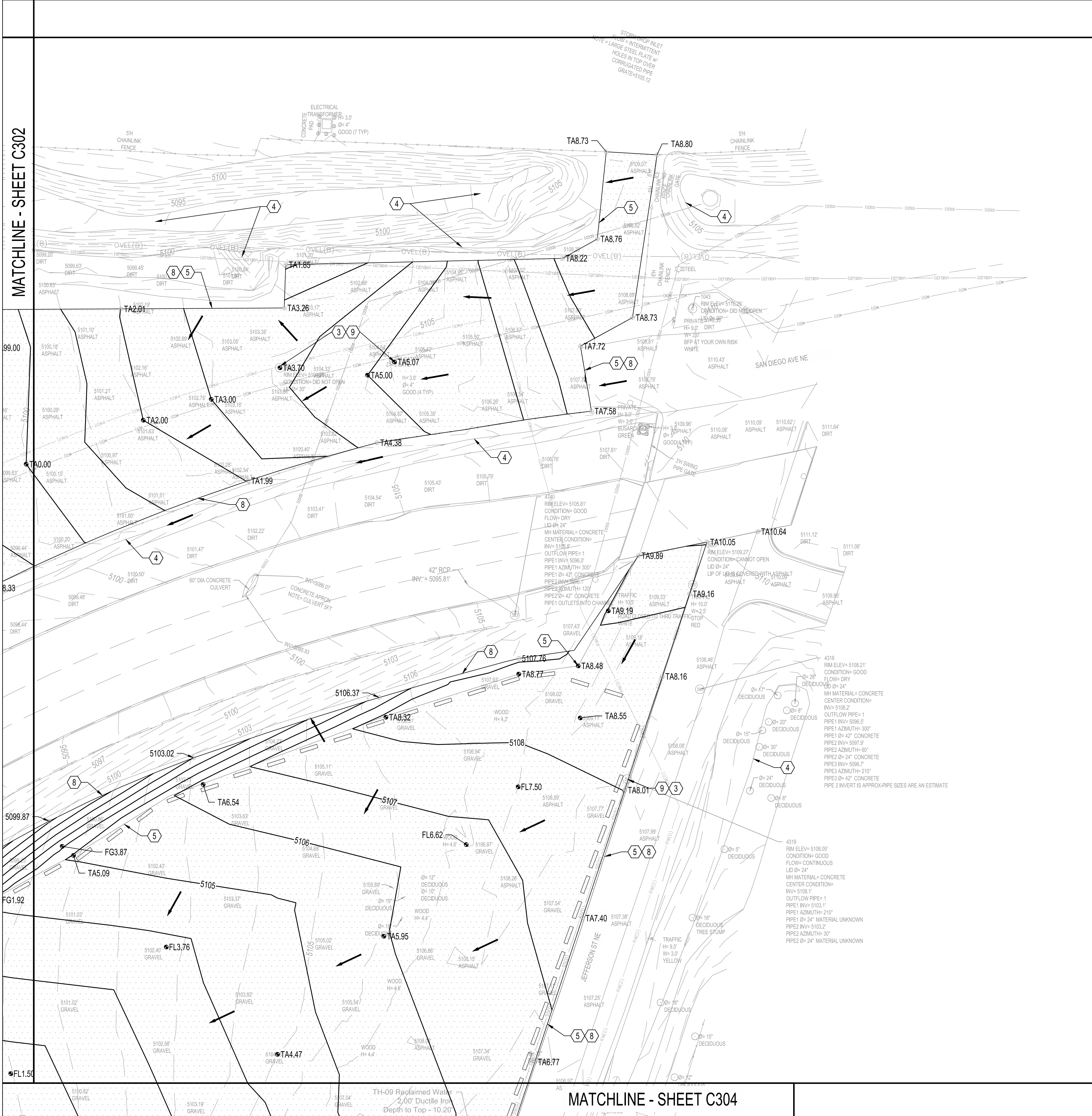
APPROVED

DATE: 04/13/22

BY: *Renee C. Brissett*

HydroTrans # B17D001G

THE APPROVAL OF THESE PLANS/PURPOSE SHALL NOT BE
CONSIDERED TO PERMIT VIOLATION OF ANY CITY
ORDINANCE OR STATE LAW REGARDING THE
CITY OF ALBUQUERQUE (FROM REQUIREMENT
CORRECTION, OR ORDINANCE OR COMMISSION OF NEW,
SPECIFICATIONS, OR CONSTRUCTIONS, SUCH APPROVAL/PLANS
SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT
AUTHORIZATION.



GRADING KEYED NOTES

1. INSTALL RETAINING WALL. CONTRACTOR TO COORDINATE WITH RED-ROCK OR AN APPROVED EQUAL MANUFACTURER TO PROVIDE STAMPED AND SIGNED STRUCTURAL DRAWINGS FOR THE DESIGN OF THE WALL. WALL DESIGN TO MATCH PROPOSED GRADING ON GRADING PLANS AND INCORPORATE DRAINAGE SYSTEM PER MANUFACTURER. WALL DESIGN TO ALSO INCORPORATE FENCING AS SPECIFIED ON THE LANDSCAPE ARCHITECT'S PLANS. PER OWNER'S REQUEST, WALL TYPE/COLOR TO MATCH REDI-ROCK KINGSTONE OR APPROVED EQUAL. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIALS.

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9. ADJUST MANHOLE /VALVE CAN TO PROPOSED GRADE.

* NOT ALL KEYED NOTES USED ON THIS SHEET.

BENCH MARKS

SEE EXISTING CONDITIONS SHEETS FOR BENCHMARK INFORMATION

ENGINEER'S SEAL

PATRICK R. SISNEROS

REGISTERED PROFESSIONAL ENGINEER

STATE OF NEW MEXICO

26515

12/23/2019

AS-BUILT INFORMATION

CONTRACTOR

DATE

WORK STARTED BY

DATE

INSPECTORS

DATE

ACCEPTANCE BY

DATE

FIELD VERIFICATION BY

DATE

DRAWINGS CORRECTED BY

DATE

REVISIONS

BY

DATE

NO.

DATE

DESIGNED BY

PS

CHECKED BY

AMP

DRAWN BY

JN

GRADING LEGEND

● 95.40

PROPERTY LINE

PROPOSED SPOT ELEVATION

TC=TOP OF CURB

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— 4960 —

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— 4959 —

PROPOSED INTERMEDIATE CONTOUR

→

DIRECTION OF FLOW

○

APPROXIMATE EASEMENT

⊗

PROPOSED STORM DRAIN MANHOLE

⊞

PROPOSED STORM DRAIN INLETS

⊟

PROPOSED STORM DRAIN CAP

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 04/13/22
BY: *Randy Brissett*
HydroTrans # B17D001G

Bohannon & Huston

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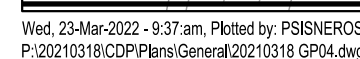
BALLOON FIESTA PARK BUS DEPOT
GRADING PLAN

BHI PROJECT NO. 20210318


DWG NO. C303

SHEET 23 OF 25

Wed, 23-Mar-2022 - 9:37 am. Plotted by: PSISNEROS
P:\20210318\CD\PP\Plan\General\20210318 C303.dwg



GRADING LEGEND



- 95.40
- PROPOSED SPOT ELEVATION
 - TC=TOP OF CURB
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- PROPOSED STORM DRAIN CAP

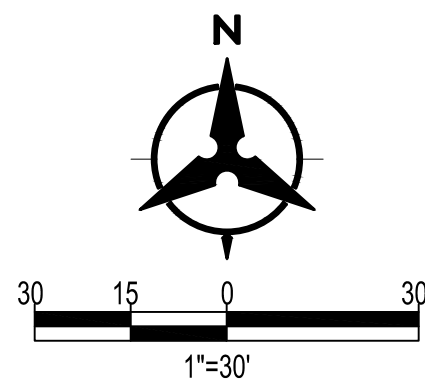
		REVISIONS		AS-BUILT	
NO.	DATE			BY	
					CONTRACTOR
					WORK STAGED BY
					INSPECTORS ACCEPTANCE BY
					FIELD VERIFICATION BY
					DRAWINGS CORRECTED BY

DESIGN
DESIGNED BY PS
CHECKED BY AMP
DRAWN BY JN

BALLOON FIESTA PARK BUS DEPOT GRADING PLAN

Bohannon  **Huston**
www.bhinc.com 800.877.5332

BHI PROJECT NO.	DWG NO.	SHEET	OF
20210318	C304	24	25



BENCH MARKS

THESE RESULTS ARE IN ACCORD WITH THE FINDINGS OF OTHER STUDIES THAT HAVE SHOWN THAT THE USE OF A SINGLE-STEP PROCESS CAN BE EFFECTIVE IN REDUCING THE RISK OF INFECTION IN PATIENTS WITH A SINGLE-STEP PROCESS.

ENGINEER'S SEAL



ADDITIONAL INFORMATION

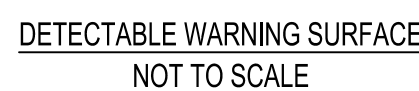
CONTRACTOR	DATE
WORK STAMPED BY	DATE
INSPECTOR'S ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE

REVISIONS

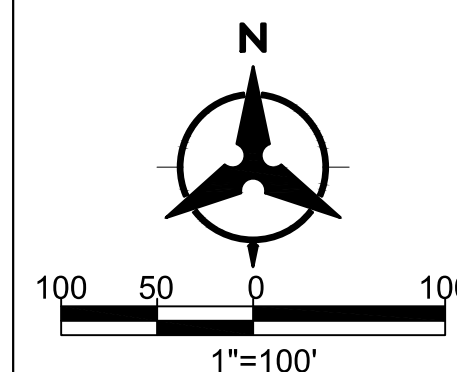
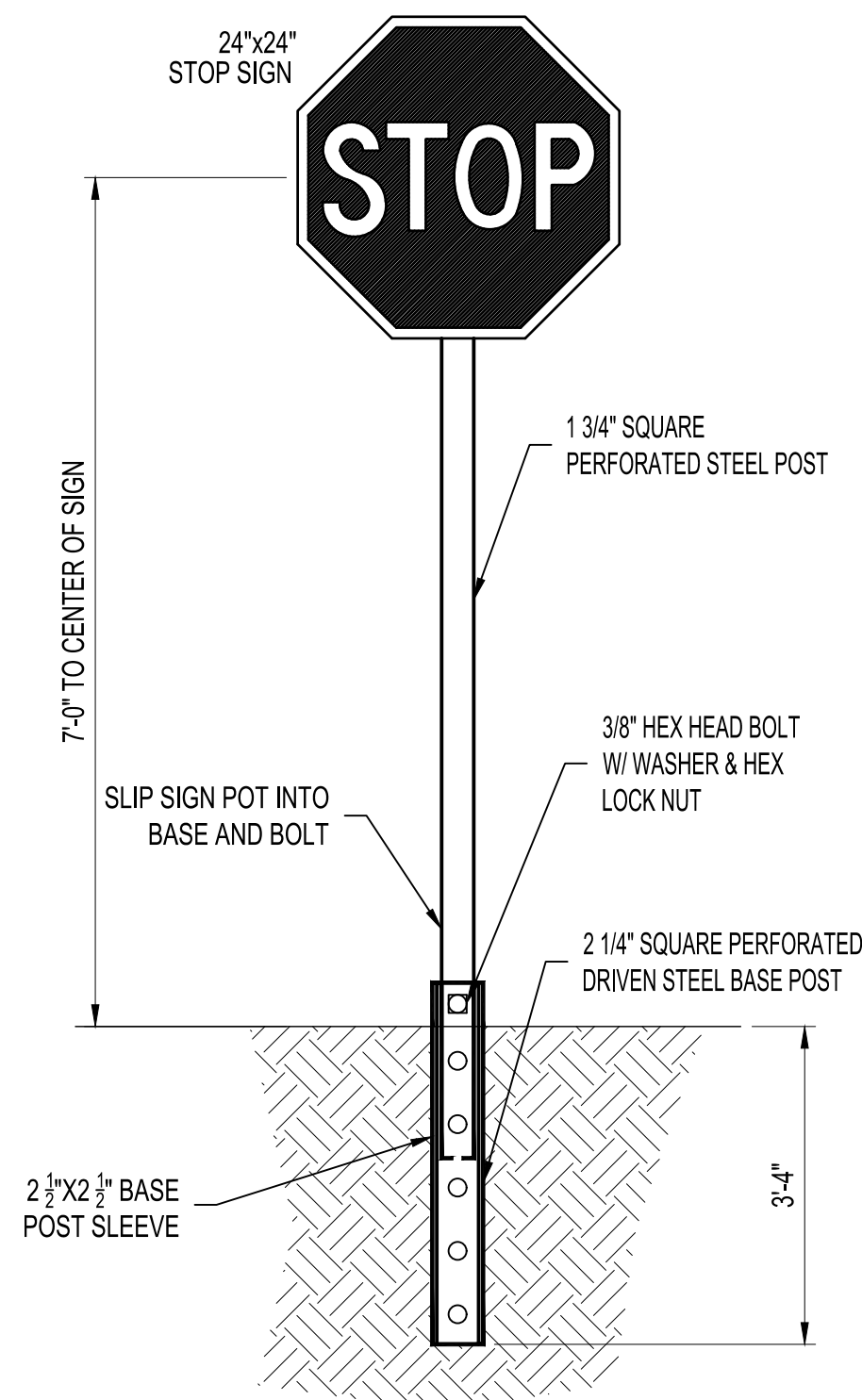
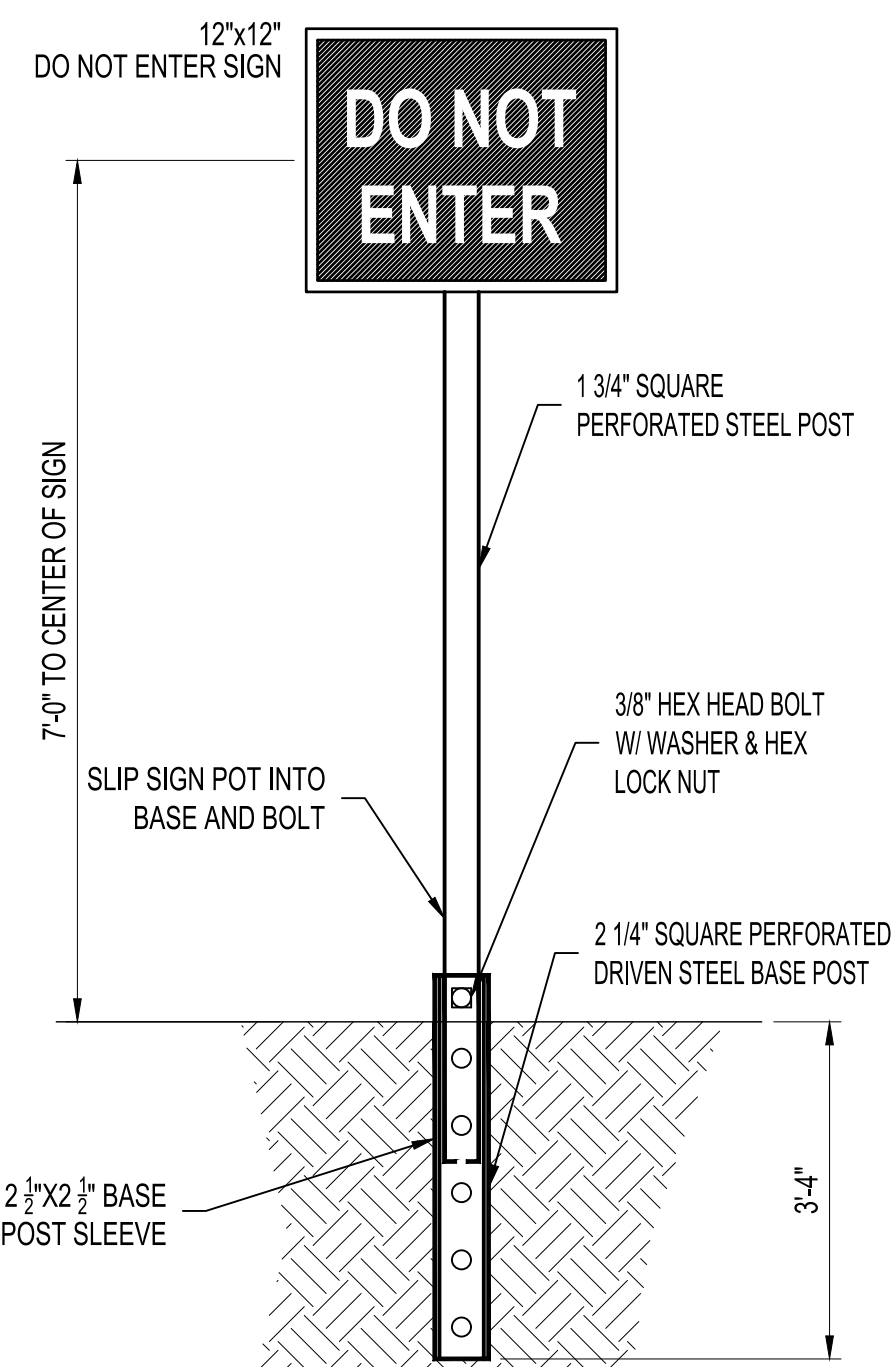
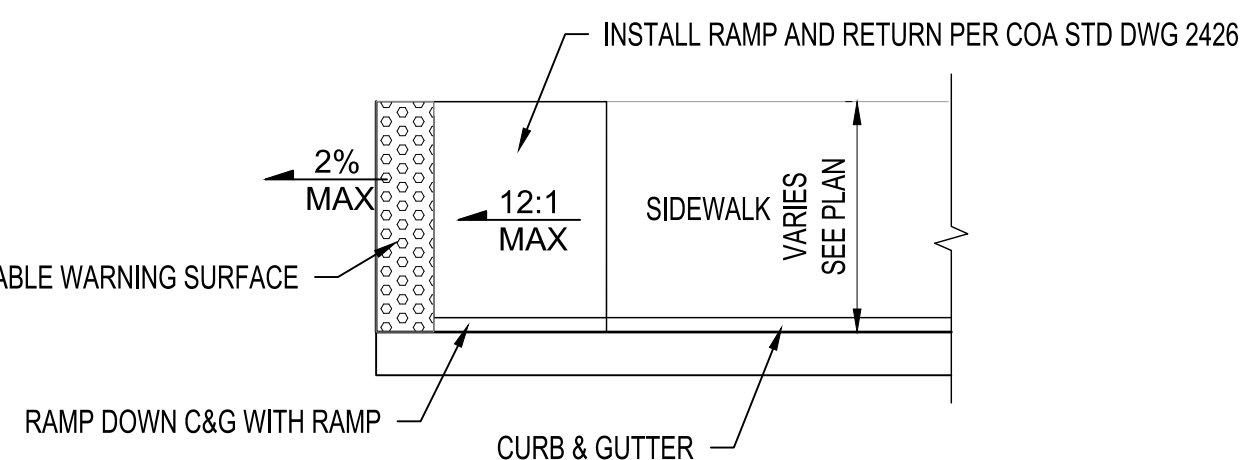
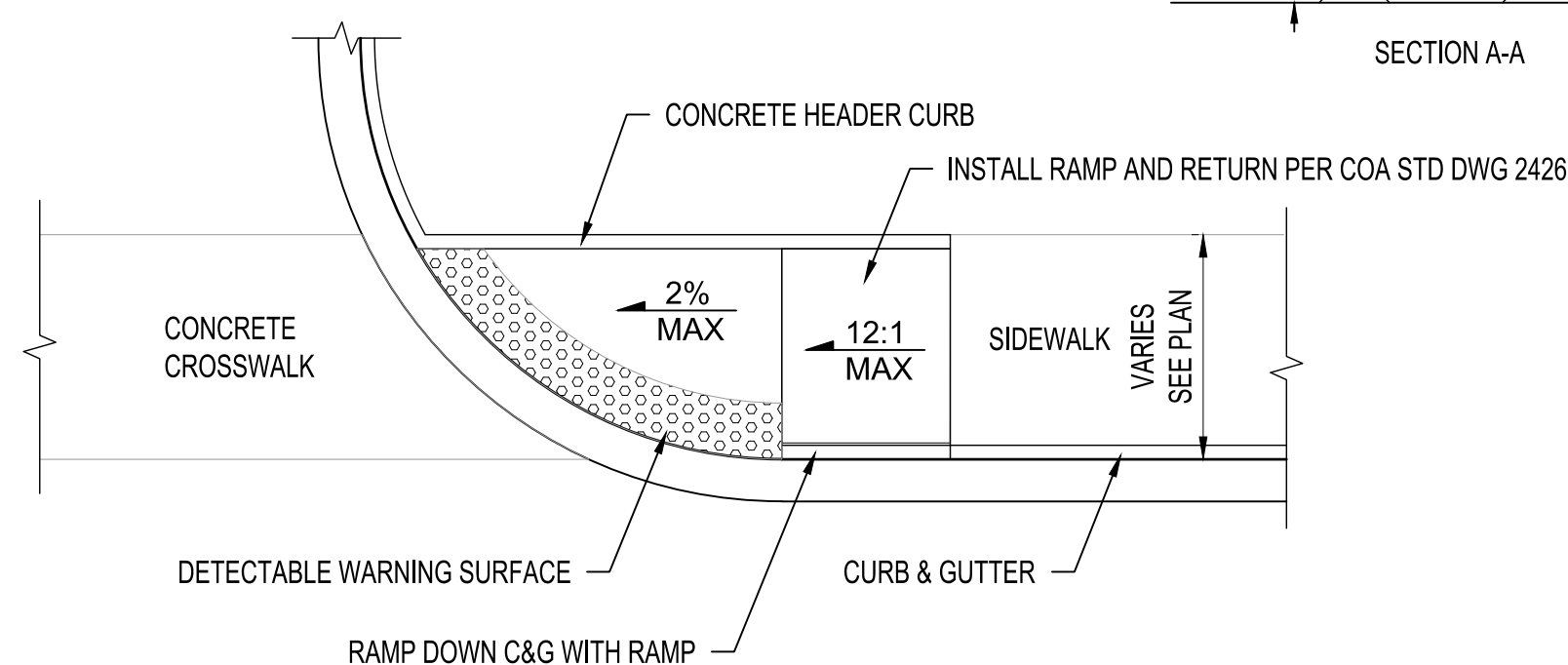
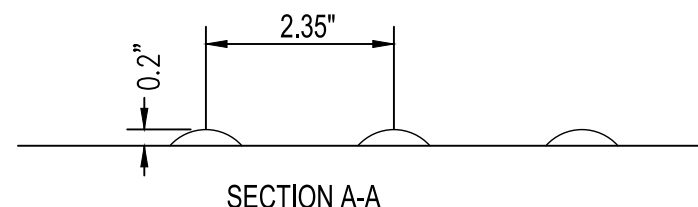
City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED

DATE: 04/13/22
BY: *Raele C. Brissette*
HydroTrans # B17D001G

THE APPROVAL OF THESE PLANS/PURPORTS SHALL NOT BE
CONSIDERED TO PERMIT VIOLATIONS OF ANY CITY
ORDINANCE OR STATE LAW, AND SHALL NOT BE
CONSIDERED TO BE A GUARANTEE OF THE
CORRECTION, OR ERROR OR DIMENSIONS IN PLANS
SPECIFICATION, OR CONSTRUCTION, SUCH APPROVED PLANS
SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT
AUTHORIZATION.



- DETECTABLE WARNING SURFACE NOTES:
1. DESIGN PER ADA GUIDELINES.
 2. SUBMIT SPECIFICATIONS TO CONSTRUCTION ENGINEER FOR EVALUATION PRIOR TO CONSTRUCTION.
 3. THE DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 23mm. (0.9"), A NOMINAL HEIGHT OF 5mm. (0.2"), AND A NOMINAL CENTER TO CENTER SPACING OF 60mm. (2.35"). THE SURFACE SHALL BE FIBERGLASS PANELS (PROCESS TO BE COORDINATED WITH AND FIELD APPROVED WITH CITY PRIOR TO INSTALLATION).
 4. THE DETECTABLE WARNING SURFACE SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE INTEGRAL PART OF THE WALKING SURFACE. PROVIDE 70/30 CONTRAST PER ADA.
 5. CONTRACTOR SHALL COORDINATE THE EXACT CONTRAST OF DETECTABLE WARNING SURFACE W/ OWNER.



BENCH MARKS
SEE EXISTING CONDITIONS SHEETS FOR BENCHMARK INFORMATION

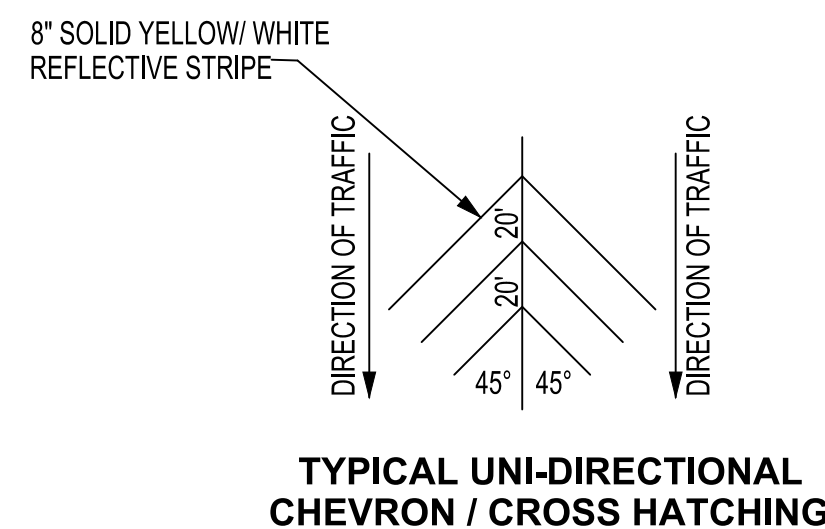
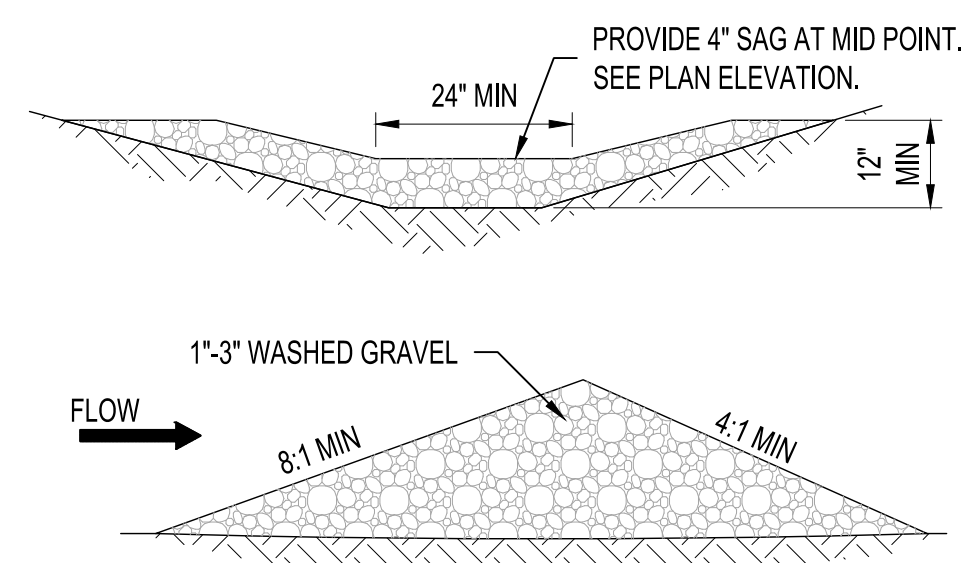
ENGINEER'S SEAL



AS-BUILT INFORMATION	
CONTRACTOR	DATE
WORK ESTIMATED BY	DATE
INSPECTORS ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
REVISIONS	

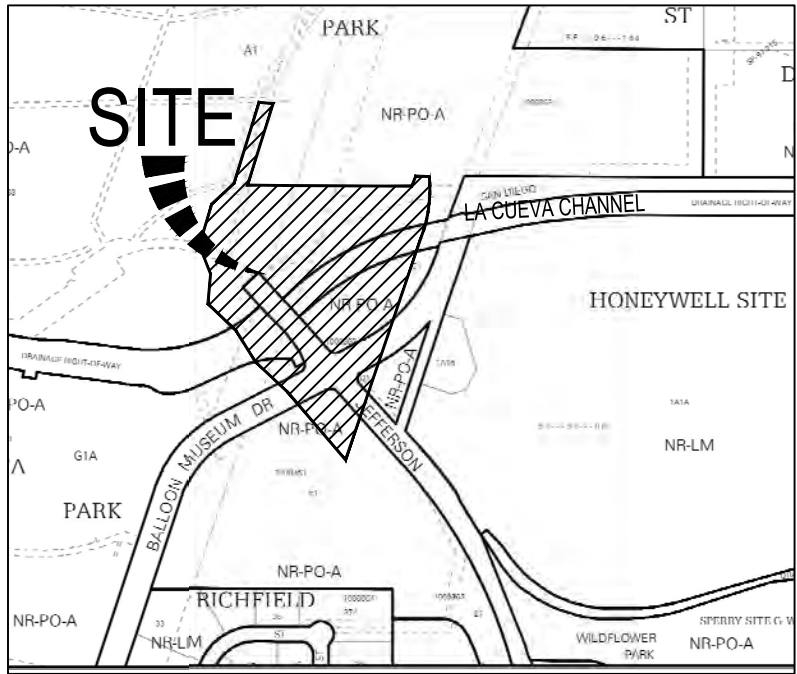
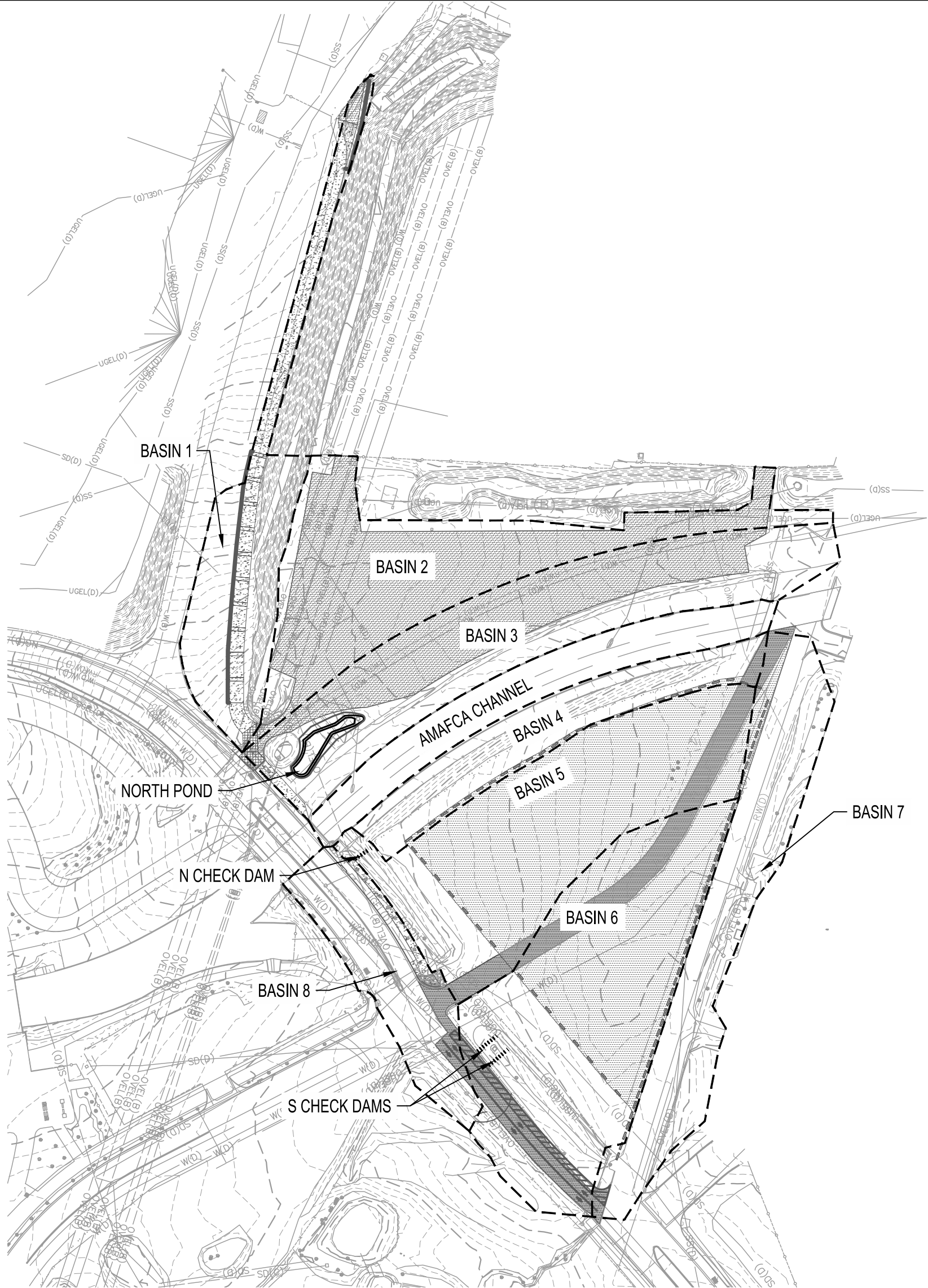
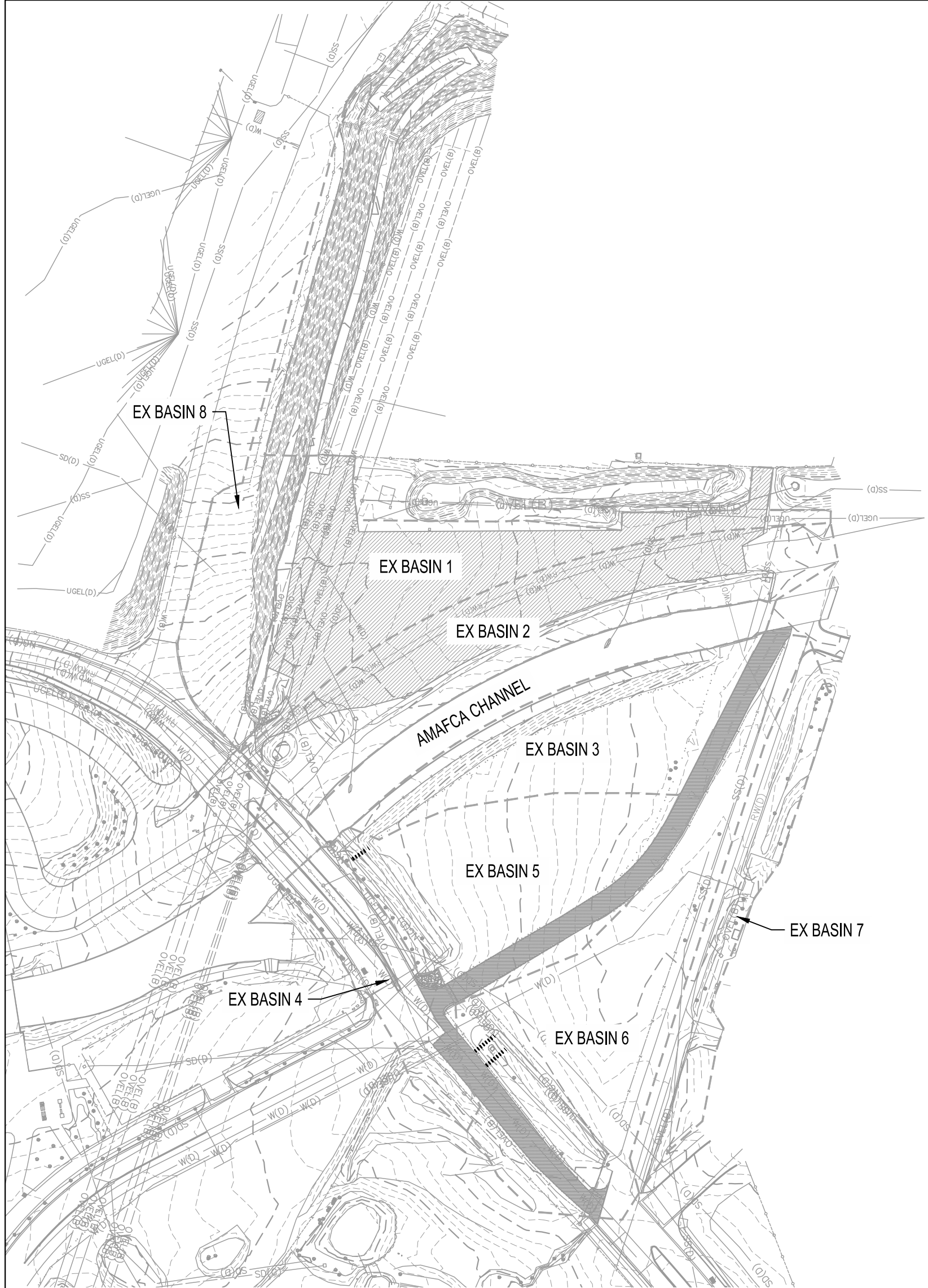
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DESIGN	
DESIGNED BY	PS
CHECKED BY	AMP
DRAWN BY	JN



BALLOON FIESTA PARK BUS DEPOT SITE DETAILS

BHI PROJECT NO.	DWG NO.	SHEET	OF
20210318	C400	25	25



VICINITY MAP



FEMA FLOOD MAP

DRAINAGE NARRATIVE

INTRODUCTION AND METHODOLOGY:

THIS SUBMITTAL PRESENTS A DRAINAGE MANAGEMENT PLAN FOR THE PROPOSED BALLOON FIESTA PARK (BFP) BUS DEPOT. THE NEW BUS DEPOT WILL BE CONSTRUCTED NEAR THE INTERSECTION OF BALLOON MUSEUM DRIVE NE AND SAN DIEGO AVENUE NE IN ALBUQUERQUE, NEW MEXICO. THE GOAL OF THE PROPOSED DRAINAGE MANAGEMENT FOR THE BUS DEPOT IS TO PROVIDE MEASURES SUCH THAT THE PROPOSED CONDITIONS HAVE A DISCHARGE RATE AT OR BELOW THE EXISTING RATE, WHILE SAFELY AND EFFICIENTLY MANAGING STORM WATER RUNOFF. ADDITIONAL DETAILS RELATED TO THE DRAINAGE DESIGN FOR THE BFP BUS DEPOT CAN BE FOUND IN THE ASSOCIATED DESIGN PLANS.

METHODOLOGY:

THE HYDROLOGIC ANALYSIS PRESENTED HERE HAS BEEN PREPARED IN ACCORDANCE WITH CHAPTER 6 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL. LAND TREATMENT PERCENTAGES WERE CALCULATED BASED ON THE ACTUAL CONDITIONS IN EACH ONSITE BASIN AND ARE SUMMARIZED IN THE "BASIN DATA TABLE" (THIS SHEET). THIS SITE WAS ANALYZED FOR THE 100-YEAR, 6-HOUR STORM EVENT.

EXISTING CONDITIONS:

THE SITE IS CURRENTLY DEVELOPED. SURROUNDING AREAS ARE DEVELOPED, INCLUDING ROADWAYS, PARKING LOTS, BUILDINGS, AND DRAINAGE CHANNELS. PER FEMA MAP PANNEL 35001C0128G, THE SITE IS NOT LOCATED WITHIN A FEMA REGULATORY FLOODPLAIN. THE 100-YEAR FLOOD BOUNDARY IS CONFINED TO THE LA CUEVA CHANNEL MAINTAINED BY AMAFCA. THE SITE IS IN RAINFALL ZONE 2, AS DEFINED BY FIGURE A-1 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, CHAPTER 6. UNDER CURRENT DEVELOPED CONDITIONS THE SITE IS DIVIDED INTO 8 SMALL DRAINAGE BASINS. THESE BASINS CONSIST OF LAND TREATMENT "C" AND "D" AND GENERALLY DRAIN TO THE AMAFCA CHANNEL. THE EXISTING ON SITE BASINS PRODUCE A 100-YEAR, 6-HOUR DISCHARGE OF 43.87 CFS; WITH A CUMULATIVE 100-YEAR, 10-DAY RUNOFF VOLUME OF 69,808 CF.

BASED ON THE PAST ALBUQUERQUE INTERNATIONAL BALLOON FIESTA PARK VISTA SANDIA STORM DRAIN REPORT DATED SEPTEMBER 25, 2000, THE PROJECT AREA SOUTH OF THE AMAFCA CHANNEL GENERALLY DRAINS TO THE AMAFCA CHANNEL BY OVERLAND FLOW AND STORM DRAIN INLETS. THE STORM RUNOFF TO THE AMAFCA CHANNEL IS CONTROLLED BY A WEIR AND A 24-INCH PIPE EAST OF THE ADJACENT BALLOON MUSEUM DRIVE BRIDGE CROSSING AND A 4-FOOT SQUARE BOX INLET CONNECTING TO A 96-INCH PIPE. PER THE REPORT THE TOTAL FLOW TO THE AMAFCA CHANNEL FOR THE PROJECT AREA SOUTH OF THE AMAFCA CHANNEL HAS A TOTAL FLOW OF 12.9 CFS.

BASED ON THE PAST ALBUQUERQUE INTERNATIONAL BALLOON FIESTA PARK GOLF CENTER GRADING AND DRAINAGE REPORT DATED JANUARY 22, 1999, THE PROJECT AREA NORTH OF THE AMAFCA CHANNEL GENERALLY DRAINS TO THE AMAFCA CHANNEL BY OVERLAND FLOW AND STORM DRAIN INLETS. THE STORM RUNOFF TO THE AMAFCA CHANNEL IS CONTROLLED BY A 48-INCH PIPE EAST OF THE ADJACENT BALLOON MUSEUM DRIVE BRIDGE CROSSING. PER THE GRADING AND DRAINAGE REPORT THE TOTAL FLOW TO THE AMAFCA CHANNEL FOR BASIN 4 IS 68.3 CFS. BASIN 4 OF THIS REPORT IS A 20.2 ACRE BASIN THAT ENCOMPASSES APPROXIMATELY 4 ACRES OF THE PROPOSED PROJECT AREA, WHICH IS APPROXIMATELY 1/5 TH THE TOTAL AREA OF BASIN 4. IT IS ASSUMED THAT THE TOTAL CONTRIBUTING RUNOFF FOR THE PROJECT AREA FROM THIS REPORT IS APPROXIMATELY 13.7 CFS.

THE DEVELOPED FLOWS FOR EACH REPORT WERE CALCULATED USING AHYMO. DEVELOPMENT OF THE PROJECT AREA IS NOT CHANGING THE EXISTING DRAINAGE PATTERNS.

PROPOSED CONDITIONS:

THIS DRAINAGE MANAGEMENT PLAN IS PROVIDED FOR THE FULL DEVELOPMENT OF THE SITE. THE SITE IS DIVIDED INTO 8 SMALL DRAINAGE BASINS. THESE BASINS CONSIST OF LAND TREATMENT "C" AND "D" AND CONTINUE DRAIN TO THE AMAFCA CHANNEL AS THEY DO IN EXISTING CONDITIONS. STORM WATER RUNOFF FROM PROPOSED BASINS 3, 5, AND 6 WILL PASS THROUGH A FIRST FLUSH STORM WATER QUALITY DETENTION SYSTEM BEFORE DRAINING OFF SITE. A LARGE PORTION OF PROPOSED BASIN 1 WILL CONVERT A DEGRADED ASPHALT/ BASE COURSE PARKING AREA INTO LANDSCAPE. THE EXISTING DEGRADED ASPHALT/ BASE COURSE PARKING AREAS IN PROPOSED BASINS 2, 3, 5, AND 6 WILL BE RE-PAVED, FULLY IMPERVIOUS, PARKING LOTS. FURTHERMORE, THE EXISTING ASPHALT ROAD WITHIN BASINS 5 AND 6 WILL BE REMOVED AND THE AREA WILL BE RE-GRADED AND RE-PAVED, FULLY IMPERVIOUS, PARKING LOT.

THE PROPOSED ON SITE BASINS PRODUCE A 100-YEAR, 6-HOUR DISCHARGE OF 53.89 CFS; WITH A CUMULATIVE 100-YEAR, 10-DAY RUNOFF VOLUME OF 144,248 CF.

FIRST FLUSH CALCULATIONS

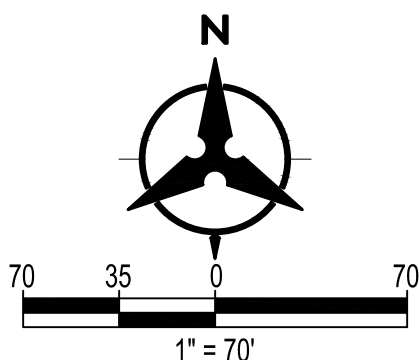
THE SITE IS A RE-DEVELOPMENT AND IS REQUIRED TO ADDRESS THE FIRST FLUSH BY EITHER ON SITE TREATMENT OR PAYING A FEE IN LIEU. THIS PROJECT WILL INCORPORATE STORM WATER TREATMENT FEATURES TO THE MAXIMUM EXTENT POSSIBLE WITHIN THE EXISTING SITE. A SHALLOW POND WILL BE CREATED WITHIN BASIN 3 (NORTH POND) THAT WILL CAPTURE THE FIRST FLUSH VOLUME FROM THAT BASIN. FOR BASINS 5 AND 6, STONE CHECK DAMS WILL BE CREATED WITHIN THE EXISTING DRAINAGE SWALES UPSTREAM OF THE EXISTING OUTFALL STRUCTURES (N CHECK DAM AND S CHECK DAM RESPECTIVELY).

THE RE-DEVELOPED PROJECT AREA IS REQUIRED TO PROVIDE A FIRST FLUSH VOLUME OF 7,482 CF. THE TREATMENT METHODS WHICH CAN BE INSTALLED WILL PROVIDE A FIRST FLUSH VOLUME OF 4,705 CF. THE REMAINING 2,777 CF CANNOT BE CAPTURED AND TREATED BEFORE THEY FLOW OFFSITE (SEE STORM WATER QUALITY POND SUMMARY TABLE, THIS SHEET).

THIS DOES NOT MEET THE FIRST FLUSH RETENTION VOLUME REQUIREMENTS. THEREFORE, A FEE-IN-LIEU WILL BE APPLIED TO COMPENSATE FOR THE UNTREATED 2,777 CF OF FIRST FLUSH VOLUME FROM THE SITE TO MEET STORM WATER QUALITY REQUIREMENTS.

CONCLUSION:

THE ON SITE IMPROVEMENT ARE NOT CHANGING THE EXISTING DRAINAGE PATTERNS AND ARE INCORPORATING STORM WATER TREATMENT FEATURES WHERE POSSIBLE AND PAY FEE IN LIEU FOR THE REMAINDER. THIS DRAINAGE MANAGEMENT PLAN DEMONSTRATES THAT THE DESIGN INTENT IS IN CONFORMANCE WITH THE CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST GRADING AND DRAINAGE APPROVAL.



BENCH MARKS

BENCH MARK LINE 1
BENCH MARK LINE 2
BENCH MARK LINE 3
BENCH MARK LINE 4
BENCH MARK LINE 5
BENCH MARK LINE 6
BENCH MARK LINE 7
BENCH MARK LINE 8
BENCH MARK LINE 9

ENGINEER'S SEAL



AS-BUILT INFORMATION

CONTRACTOR	DATE
WORK STARTED BY	DATE
INSPECTORS ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE

REVISIONS

NO.	DATE	DESCRIPTION

DESIGN

DESIGNED BY	PS
CHECKED BY	AMP
DRAWN BY	JN

BALLOON FIESTA PARK BUS DEPOT EXISTING CONDITIONS DRAINAGE MANAGEMENT PLAN

BHI PROJECT NO.	20210318	DWG NO.	DMP00	SHEET	1	OF	2
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20210318 BFP Bus Depot												
Basin Data Table												
This table is based on page 6-10 of the DPM, Zone: 2												
Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	E(100yr-6hr)	V(100yr-6hr) (CF)	V(100yr-24hr) (CF)	V(100yr-10d) (CF)
			A	B	C	D			(inches)			
EXISTING												
EX 1	81990	1.88	0.0%	0.0%	90.0%	10.0%	3.18	5.98	1.16	7926	8131	8834
EX 2	93622	2.15	0.0%	0.0%	90.0%	10.0%	3.18	6.83	1.16	9050	9284	10088
EX 3	70213	1.61	0.0%	0.0%	100.0%	0.0%	3.05	4.92	1.03	6027	6027	6027
EX 4	34730	0.80	0.0%	0.0%	40.0%	60.0%	3.82	3.05	1.81	5238	5759	7548
EX 5	87524	2.01	0.0%	0.0%	100.0%	0.0%	3.05	6.13	1.03	7512	7512	7512
EX 6	120057	2.76	0.0%	0.0%	100.0%	0.0%	3.05	8.41	1.03	10305	10305	10305
EX 7	46415	1.07	0.0%	0.0%	40.0%	60.0%	3.82	4.07	1.81	7001	7697	10088
EX 8	54217	1.24	0.0%	0.0%	60.0%	40.0%	3.57	4.44	1.55	7003	7545	9407
TOTAL	588768	13.52	-	-	-	-	-	43.83	-	60062	62261	69808

STORM WATER QUALITY POND SUMMARY TABLE:

	Tributary Basins	Volume (REQUIRED) (cf)	Volume (ACTUAL) (cf)	Pond Bottom (ft)	Maximum Water Surface Elevation (ft)
NORTH POND	B3	983	2068	5091.00	5092.00
N CHECK DAM	B5	1576	1953	5089.60	5092.14
S CHECK DAMS	B6	1701	684	5094.50	5095.40
NO POND	1,2,4,7, & 8	3222	0	0.00	0.00
Total	-	7482	4705	-	-

20210318 BFP Bus Depot													
Basin Data Table													
This table is based on page 6-10 of the DPM, Zone: 2													
Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	E(100yr-6hr) (inches)	V _(100yr-6hr) (CF)	V _(100yr-24hr) (CF)	V _(100yr-10d) (CF)	SW Quality (CF)
			A	B	C	D							
PROPOSED													
B1	54217	1.24	0.0%	0.0%	40.0%	60.0%	3.82	4.76	1.81	8178	8991	11783	569
B2	81990	1.88	0.0%	0.0%	5.0%	95.0%	4.28	8.05	2.27	15476	17423	24108	1363
B3	93622	2.15	0.0%	0.0%	40.0%	60.0%	3.82	8.22	1.81	14121	15526	20347	983
B4	40189	0.92	0.0%	0.0%	100.0%	0.0%	3.05	2.81	1.03	3450	3450	3450	0
B5	100035	2.30	0.0%	0.0%	10.0%	90.0%	4.21	9.67	2.20	18340	20591	28318	1576
B6	114380	2.63	0.0%	0.0%	15.0%	85.0%	4.15	10.89	2.14	20350	22781	31126	1701
B7	67433	1.55	0.0%	0.0%	40.0%	60.0%	3.82	5.92	1.81	10171	11183	14655	708
B8	36950	0.85	0.0%	0.0%	10.0%	90.0%	4.21	3.57	2.20	6774	7606	10460	582
TOTAL	588816	13.52	-	-	-	-	-	53.89	-	96859	107548	144248	7482