CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

August 20, 2018

Mike Balaskovits, PE
Bohannan Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

RE: **Broadstone Highlands North Block**
Cedar and Copper NE
Revised Grading and Drainage Plan
Engineer's Stamp Date: 8/10/18
Hydrology File: K15D034A

Dear Mr. Balaskovits:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based on submittal received on 8/16/18 the revised Grading and Drainage Plan is approved for Site Plan Building Permit, Grading, Foundation, and Building Permit.

Prior Certificate of Occupancy (For Information):

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.
2. City acceptance and close-out of the public Work Order will be required, unless a financial guarantee has been posted.
3. The Drainage Certification will need to include all top of Retaining Wall Elevations.
4. Include a copy of the Bernalillo County Recorded Revocable Permit.
5. For Information. Hydrology and Transportation files are available online through the City's GIS Viewer 2.0: https://www.cabq.gov/gis/advanced-map-viewer. Turn on the *HydroTrans* layer: *Operational Layers* > *Albuquerque Layers* > *Sites* > *HydroTrans*. Select the desired polygon from the map and click *Link to Project Documents*.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana M. Peterson
Senior Engineer, Planning Dept.
Development Review Services

Bohannan Huston

Engineering
Spatial Data
Advanced Technologies

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335
www.bhinc.com
voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

CLIENT/COURIER TRANSMITTAL

To: Dana Peterson
City of Albuquerque
600 2nd St. NW
Albuquerque, NM 87102

Phone: (505) 924-3880

Requested by: Michael Balaskovits

Date: August 16, 2018

Time Due:
- ☐ **This A.M.**
- ☒ **This P.M.**
- ☐ **Rush** _____
- ☐ **By Tomorrow**

DELIVERY VIA
- ☒ **Courier** ☐ **Federal Express**
- ☐ **Mail** ☐ **UPS**
- ☐ **Other**

PICK UP
Item: _____

Job No.: 20160154

Job Name: Broadstone Highlands North Block

ITEM NO.	QUANTITY	DESCRIPTION
1	1	Drainage Info Sheet
2	1	Drainage Management Plan
3	1	Grading Plan

COMMENTS / INSTRUCTIONS

James,

Please find attached the Drainage Management Plan for Broadstone Highlands North Block. We are requesting Hydrology approval in support of Site Plan for Building Permit Approval, Building Permit Approval, & Work Order Approval. Let me know if you have any questions.
Thanks,
Mike

REC'D BY:_____ **DATE:**_____ **TIME:**_____

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Broadstone Highlands North Block Building Permit #: 2017-25435 Hydrology File #: K15D034A

DRB#: 1010879 EPC#: _____ Work Order#: _____

Legal Description: TRACT 1 THE HIGHLANDS

City Address: N/A

Applicant: BOHANNAN HUSTON, INC. Contact: MIKE BALASKOVITS

Address: 7500 JEFFERSON ST NE ALBUQUERQUE, NM 87109

Phone#: 505-823-1000 Fax#: 505-798-7988 E-mail: MBALASKOVITS@BHINC.COM

Other Contact: TITAN DEVELOPMENT CENTER LAND, LLC (OWNER) Contact: JOSH ROGERS

Address: 6300 RIVERSIDE PLAZA LANE NW #200

Phone#: 505-998-0163 Fax#: _____ E-mail: JROGERS@TITAN-DEVELOPMENT.COM

TYPE OF DEVELOPMENT: ☐ PLAT ☐ RESIDENCE ☑ DRB SITE ☐ ADMIN SITE

Check all that Apply:

DEPARTMENT:

☑ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION

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?

IS THIS A RESUBMITTAL?: ☑ Yes ☐ No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☑ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY

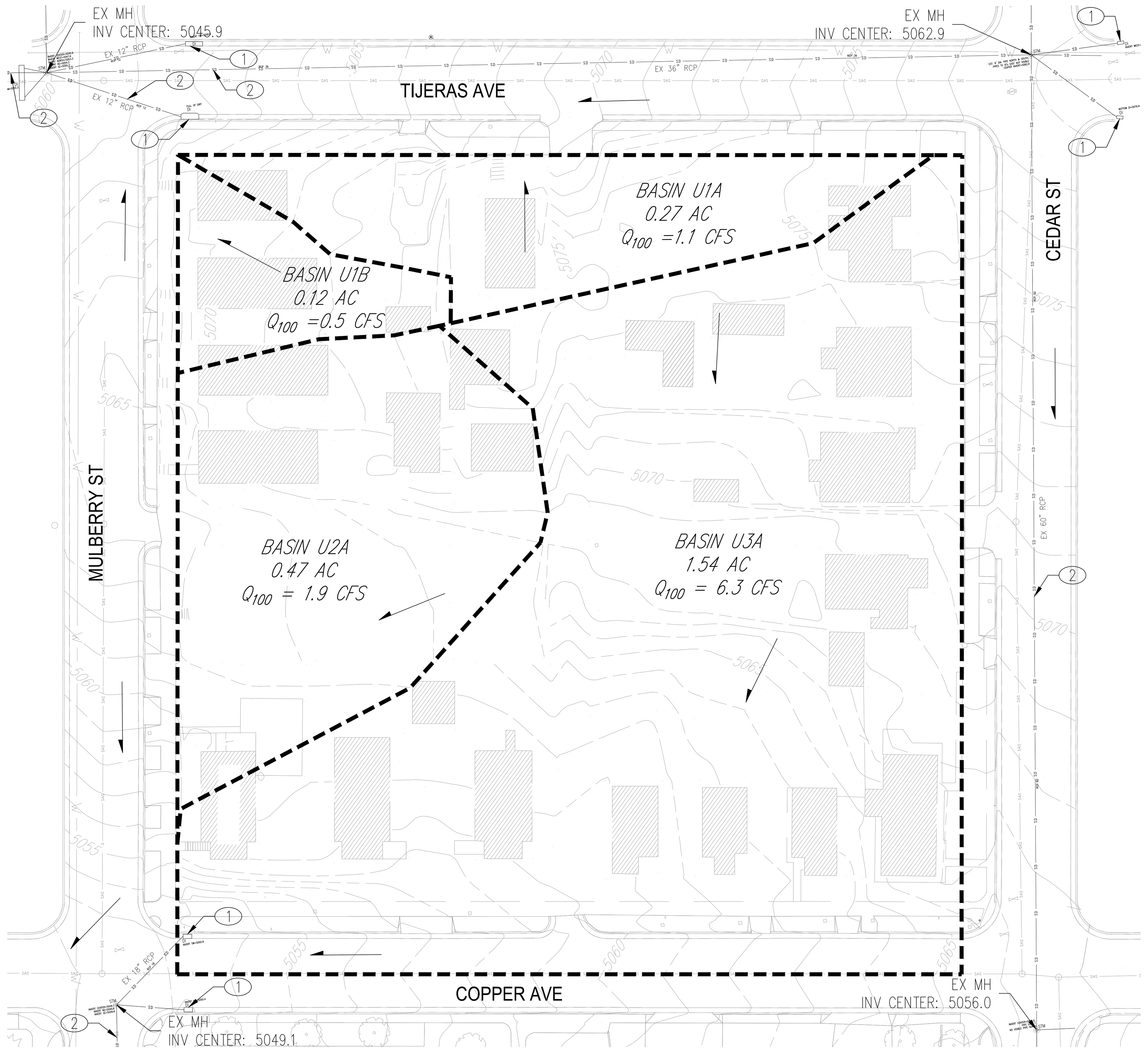
☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☑ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL

☐ 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) _____

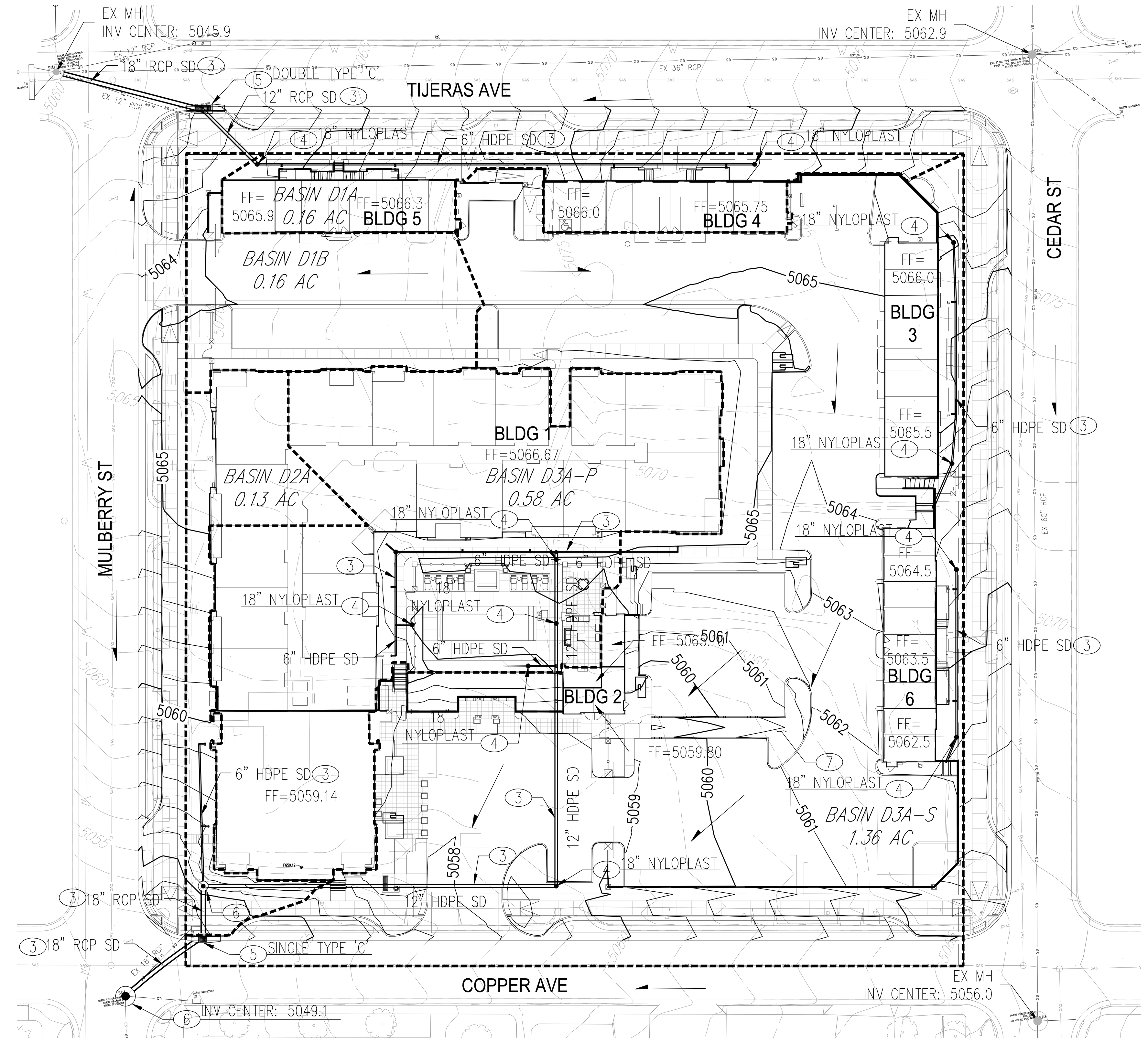
DATE SUBMITTED: 8/16/18 By: Mike Balaskovits

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



EXISTING CONDITIONS



PROPOSED CONDITIONS

DRAINAGE NARRATIVE

EXISTING CONDITIONS:

THE SITE IS APPROXIMATELY 2.4 ACRES (INCLUSIVE OF RECENTLY VACATED ALLEYS AND RIGHT OF WAYS), SITUATED AT THE NORTHEAST CORNER OF COPPER AVE AND MULBERRY ST. THIS SITE HAS HISTORICALLY BEEN FULLY DEVELOPED AS A DETACHED MULTI-FAMILY HOUSING DEVELOPMENT.

THIS PROJECT WAS RECENTLY APPROVED; HOWEVER ADDITIONAL UNITS WERE NECESSARY WHICH RESULTED IN MINOR MODIFICATIONS TO THE SITE PLAN. THE PREVIOUS DRAINAGE SCHEME AND BASINS REMAINS THE SAME AS WHAT WAS PREVIOUSLY APPROVED WITH MINOR MODIFICATIONS.

THE SITE IS DIVIDED INTO FOUR ONSITE BASINS THAT DRAIN TO DIFFERENT STORM DRAIN NETWORKS. BASIN U1A CURRENTLY SHEET FLOWS INTO TIJERAS AVE AND IS CAPTURED BY AN EXISTING INLET. BASIN U1B SHEET FLOWS TO MULBERRY ST AND DISCHARGES INTO A LARGE INLET WITHIN THE INTERSECTION OF TIJERAS AVE & MULBERRY ST. BASIN U2A SHEET FLOWS INTO MULBERRY AVE AND CONTINUES TO HEAD SOUTH TO COPPER AND ULTIMATELY WEST IN COPPER AVE TO AN INLET LOCATED IN OAK ST. BASIN U3A CURRENTLY DISCHARGES INTO COPPER AVE AND IS CAPTURED BY AN EXISTING INLET AT THE INTERSECTION OF COPPER AVE & MULBERRY ST. THERE IS NO OFFSITE DRAINAGE THAT ENTERS THE SITE.

THE TOTAL ONSITE EXISTING FLOW RATE FROM THE CURRENT DEVELOPMENT IS APPROXIMATELY 9.8 CFS.

PROPOSED CONDITIONS:

THE BROADSTONE HIGHLANDS NORTH BLOCK WILL INCLUDE A NEW MULTI-FAMILY COMPLEX (BLDG 1), POOL RAMADA & EQUIPMENT BUILDING (BLDG 2), AND FOUR CARRIAGE UNITS (BLDGS 3-6) THAT SIT AT THE NORTHEAST CORNER OF COPPER AVE & MULBERRY ST. ADDITIONAL ON STREET PARKING WILL BE PROVIDED AS A PART OF THIS PROJECT. A PUBLIC WORK ORDER WILL CONSTRUCT THESE SPACES AND INCLUDE MINOR INLET IMPROVEMENTS BASED ON THE NEW CURB LOCATION. THIS SITE HAS HISTORICALLY BEEN FULLY DEVELOPED AND IS CONSIDERED AN INFILL PROJECT. THE IMPERVIOUS AREA OF THE SITE WILL INCREASE TO 90% D AND 10% C FOR DEVELOPED FLOWS.

DEVELOPED BASINS

THE DEVELOPED BASINS WILL GENERALLY ADHERE TO THE HISTORIC FLOW WITH A FEW EXCEPTIONS. THE FOLLOWING IS A DESCRIPTION OF HOW EACH BASIN WILL DRAIN. PLEASE REFER TO THE "ULTIMATE DEVELOPED CONDITIONS BASIN DATA TABLE", FOR THE PROPOSED BASIN FLOWS.

BASIN D1A HAS BEEN REDUCED AND WILL CONTINUE TO DISCHARGE INTO THE EXISTING STORM DRAIN WITHIN TIJERAS AVE. ROOF DRAINAGE FROM BUILDINGS 4 & 5 WILL BE ULTIMATELY PIPED INTO THE PROPOSED RELOCATED INLET IN TIJERAS AVE, AS WELL AS THE SURFACE DRAINAGE ALONG THE FRONTAGE OF THE BUILDINGS. THE REMAINDER OF THIS BASIN WILL DRAIN VIA SURFACE FLOW INTO THE ROADWAY TO THE SAME INLET.

BASIN D1B INCREASED SLIGHTLY AND WILL CONTINUE TO DISCHARGE (VIA SHEET FLOW) INTO THE LARGE EXISTING INLET WITHIN TIJERAS AVE & MULBERRY ST.

BASIN D2A IS A SMALL BASIN ALONG THE WESTERN FACE OF BUILDING 1 AND A PORTION OF THE BUILDING 1 ROOF DRAIN THAT WILL SURFACE FLOW INTO MULBERRY UNTIL IT REACHES INLETS LOCATED AT THE INTERSECTION OF COPPER AVE AND OAK ST. THIS BASIN AREA WAS REDUCED BASED ON THE PROPOSED GRADING FOR THIS BLOCK.

BASIN D3A-S INCLUDES A PORTION OF THE SITE'S HARDSCAPE AS WELL AS ROOF DRAINAGE FROM BUILDINGS 2,3, & 6. THIS BASIN WILL SHEET FLOW INTO COPPER AVE AND BE CAPTURED IN THE PROPOSED RELOCATED INLET WHICH ULTIMATELY TIES TO THE EXISTING 21" RCP LINE THAT RUNS IN MULBERRY ST.

BASIN D3A-P INCLUDES ROOF DRAINAGE FROM BUILDING 1 AND THE POOL DECK AREA THAT WILL BE PIPED DIRECTLY INTO THE COPPER AVE PROPOSED RELOCATED INLET WHICH ULTIMATELY TIES TO THE EXISTING 21" RCP LINE THAT RUNS IN MULBERRY ST.

THE TOTAL ONSITE PROPOSED FLOW RATE FROM THE PROPOSED DEVELOPMENT IS APPROXIMATELY 10.9 CFS. COMPARISON OF THE FLOW BETWEEN EXISTING AND PROPOSED CONDITIONS WAS FOUND HAVE AN OVERALL INCREASE OF APPROXIMATELY 1.1 CFS, OVERALL INDICATING THAT THE HISTORICAL DEVELOPED FLOWS ARE CLOSE TO THE SITE'S PROPOSED DEVELOPED CONDITIONS.

CONCLUSION:

DUE TO THE SIGNIFICANT GRADE CHANGE OF APPROXIMATELY 24 FEET ACROSS THE SITE AND THE DENSITY OF THIS PROJECT IN AN INFILL DEVELOPMENT, THE OWNER HAS DISCUSSED WITH CITY STAFF THE USE OF CASH IN LIEU TO ACCOMPLISH THE "FIRST FLUSH" REQUIREMENTS. ISLANDS WILL BE DEPRESSED WHERE APPLICABLE AND SERVE AS WATER HARVESTING AREAS BUT WILL NOT MEET THE FIRST FLUSH VOLUME REQUIRED.

THE DEVELOPED FLOWS FOR THIS SITE GENERALLY REMAINS UNCHANGED FROM THE EXISTING CONDITIONS, HOWEVER THIS PLAN DIVERTS FLOWS DIRECTLY INTO THE PROPOSED INLET WITHIN COPPER AVE. THE EXISTING ROADWAY SLOPES WILL REMAIN THE SAME. THESE ADJUSTMENTS DEMONSTRATE THAT THE DRAINAGE ELEMENTS PROPOSED WITH THE PROJECT ARE CAPABLE OF SAFELY CONVEYING THE 100 YR, 6 HR STORM EVENT IN ACCORDANCE WITH THE DEVELOPMENT PROCESS MANUAL. WITH THIS SUBMITTAL, WE ARE REQUESTING COA HYDROLOGY APPROVAL IN SUPPORT OF SITE PLAN FOR BUILDING PERMIT APPROVAL, BUILDING PERMIT APPROVAL, & WORK ORDER APPROVAL.

KEYNOTES

1. EXISTING STORM DRAIN INLET
2. EXISTING STORM DRAIN TO REMAIN
3. PROPOSED STORM DRAIN
4. PROPOSED STORM DRAIN INLET
5. PROPOSED RELOCATED STORM DRAIN INLET
6. PROPOSED STORM DRAIN MANHOLE
7. PROPOSED WATER HARVESTING AREA

Broadstone Highlands North Block

Existing Developed Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 2

Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	V(100yr) (inches)	$V_{(100yr-6hr)}$ (CF)	$V_{(100yr-24hr)}$ (CF)
CURRENT ONSITE BASINS											
U1A	11696	0.27	0.0%	0.0%	40.0%	60.0%	4.08	1.09	1.72	1680	1914
U1B	5151	0.12	0.0%	0.0%	40.0%	60.0%	4.08	0.48	1.72	740	843
U2A	20544	0.47	0.0%	0.0%	40.0%	60.0%	4.08	1.92	1.72	2951	3362
U3A	66977	1.54	0.0%	0.0%	40.0%	60.0%	4.08	6.27	1.72	9622	10962
TOTAL	**104368**	**2.40**	-	-	-	-	-	**9.77**	-	**14994**	**17082**

Broadstone Highlands North Block

ULTIMATE Developed Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 2

Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	V(100yr) (inches)	$V_{(100yr-6hr)}$ (CF)	$V_{(100yr-24hr)}$ (CF)	$V_{(100yr-10day)}$ (CF)	FIRST FLUSH (CF)
PROPOSED BASINS													
D1A	6926	0.16	0.0%	0.0%	10.0%	90.0%	4.54	0.72	2.02	1166	1374	1374	177
D1B	7146	0.16	0.0%	0.0%	10.0%	90.0%	4.54	0.75	2.02	1204	1418	1418	182
D2A	5603	0.13	0.0%	0.0%	10.0%	90.0%	4.54	0.58	2.02	944	1112	1112	143
D3A-S	59233	1.36	0.0%	0.0%	10.0%	90.0%	4.54	6.18	2.02	9976	11753	11754	1510
D3A-P	25466	0.58	0.0%	0.0%	10.0%	90.0%	4.54	2.66	2.02	4289	5053	5053	649
TOTAL	**104374**	**2.40**	-	-	-	-	-	**10.89**	-	**17578**	**20709**	**20711**	**2662**

BASIN COMPARISON ID	Difference from Onsite Existing Conditions to Proposed Conditions Q(100yr) (CFS)
1A	-0.37
1B	0.26
2A	-1.34
3A	2.57

NOTE: '+' indicates an increase in Q from existing to proposed. '-' indicates a decrease in Q from existing to proposed.

GRADING LEGEND

- PROPERTY LINE
- 5025 EXISTING INDEX CONTOUR
- 5024 EXISTING INTERMEDIATE CONTOUR
- 5025 PROPOSED INDEX CONTOUR
- 5024 PROPOSED INTERMEDIATE CONTOUR
- EXISTING BASIN BOUNDARY
- PROPOSED BASIN BOUNDARY
- EASEMENT
- BASIN UXX — EXISTING BASIN ID
- BASIN DXX — PROPOSED BASIN ID
- BASIN DXX-P — PROPOSED BASIN ID-PIPED
- BASIN DXX-S — PROPOSED BASIN ID-SHEET FLOW
- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- SD — PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL

N

40 20 0 40

1"=40'

BROADSTONE HIGHLANDS NORTH

NWC CEDAR ST AND COPPER AVE
ALBUQUERQUE, NEW MEXICO

Office of Rich Barber Architecture, LLC — ORB

WorldHQ@ORBArch.com

NOT FOR CONSTRUCTION

TITAN DEVELOPMENT

ALLIANCE RESIDENTIAL COMPANY

Bohannan Huston
www.bhinc.com 800.877.5332

REVISIONS

No.	Date	Description
1	8/30/17	1ST CITY REVIEW
2	8/30/17	DESIGN TEAM COORDINATION
3	10/12/17	2ND CITY REVIEW
4	10/12/17	DESIGN TEAM COORDINATION
5	05/18/18	3RD CITY REVIEW/OWNER CHANGES

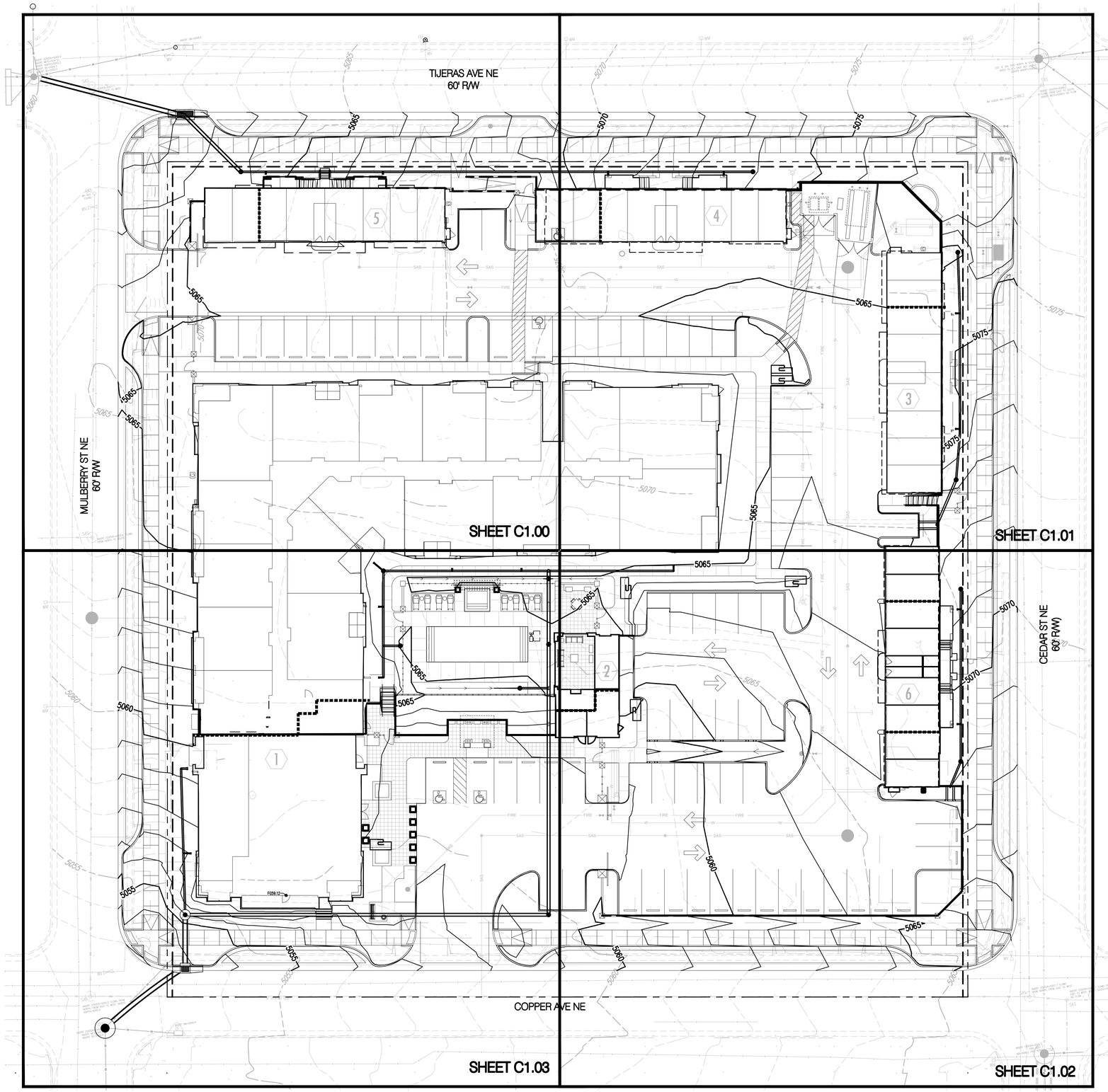
4TH CITY SUBMITTAL

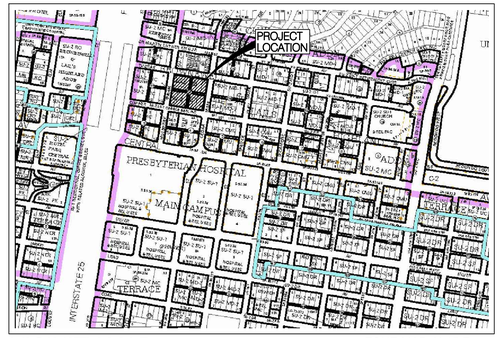
DATE: AUGUST 10, 2018 ORB # 16-210

C0.01

DRAINAGE MANAGEMENT PLAN

FILE: P:\20160154\CDP\Plans\General\20160154 N DMP.dwg USER: enewman DATE: Aug. 16 2018 TIME: 03:12 pm





VICINITY MAP

ZONE MAP: K-15-Z

GRADING SHEET NOTES

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

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

3. 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," AS PROVIDED BY THE ARCHITECT OR OWNER. ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE COA STANDARD SPECIFICATIONS FOR PUBLIC WORKS.

4. EARTH SLOPES SHALL NOT EXCEED 5 HORIZONTAL TO 1 VERTICAL PER THE GEOTECHNICAL REPORT UNLESS SHOWN OTHERWISE.

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

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

7. 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.

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

9. ALL PROPOSED CONTOURS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR MEDIANS AND ISLANDS.

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

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

12. HDPE PIPE AND FITTINGS SHALL BE INSTALLED AND BACKFILLED PER MANUFACTURER SPECIFICATIONS. CONNECTIONS TO CONCRETE MANHOLES AND CONCRETE DROP INLETS SHALL USE WATER STOP GASKETS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS

NOTE: ALL WORK SHOWN IN THE R/W SHALL BE CONSTRUCTED PER COA PUBLIC WORK ORDER CPN 764782. GRADES SHOWN WITHIN THE R/W ARE FOR REFERENCE ONLY. IF PROPOSED GRADES IN R/W DIFFER FROM ON-SITE GRADES SHOWN, CONTACT ENGINEER IMMEDIATELY.

N

10 5 0 10

1"=10'

GENERAL SHEET NOTES

1. 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, COA PUBLIC WORKS STANDARDS SHALL APPLY.

2. 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.

3. 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.

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

5. 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.

6. 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.

7. 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.

8. 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.

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

10. 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.

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

12. 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.

13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

14. THE PROJECT MUST CONFORM WITH THE EROSION AND SEDIMENT REQUIREMENTS OF THE 2003 EPA CONSTRUCTION GENERAL PERMIT OR LOCAL STANDARDS & CODES WHICHEVER IS MORE STRINGENT.

BROADSTONE HIGHLANDS NORTH

NWC CEDAR ST AND COPPER AVE
ALBUQUERQUE, NEW MEXICO

Office of Rich Barber Architecture, LLC
ORB
WorldHQ@ORBArch.com

MICHAEL NILAND
NEW MEXICO
18187
8-10-18
LICENSED PROFESSIONAL ENGINEER

TITAN DEVELOPMENT
ALLIANCE RESIDENTIAL COMPANY
Bohannan Huston
www.bhinc.com 800.877.5332

REVISIONS

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2	8/30/17	DESIGN TEAM COORDINATION
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7	8/10/18	4TH CITY REVIEW/COORDINATION

4TH CITY SUBMITTAL

DATE: AUGUST 10, 2018 ORB # 16-210

7

C0.01

OVERALL GRADING PLAN

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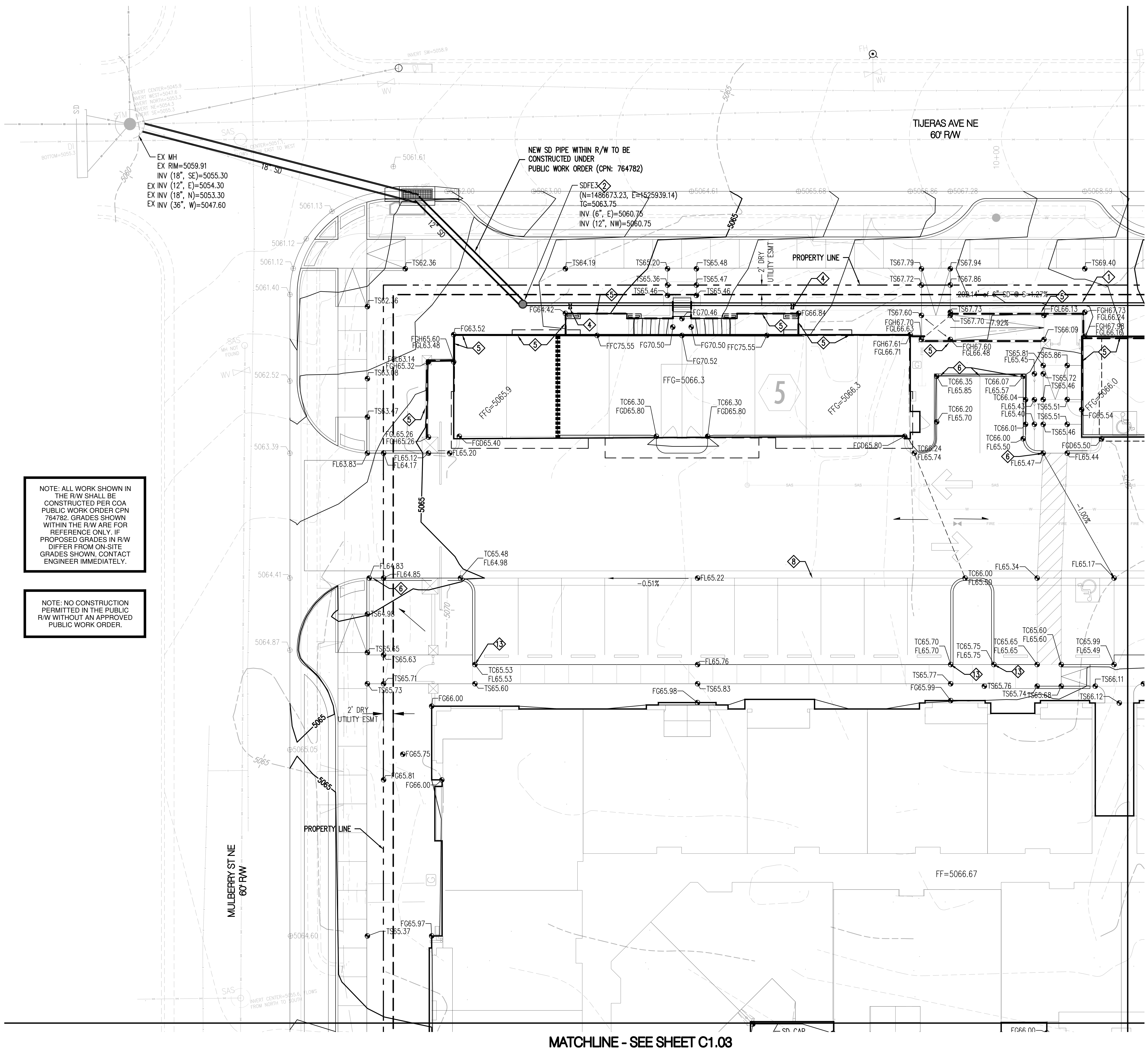
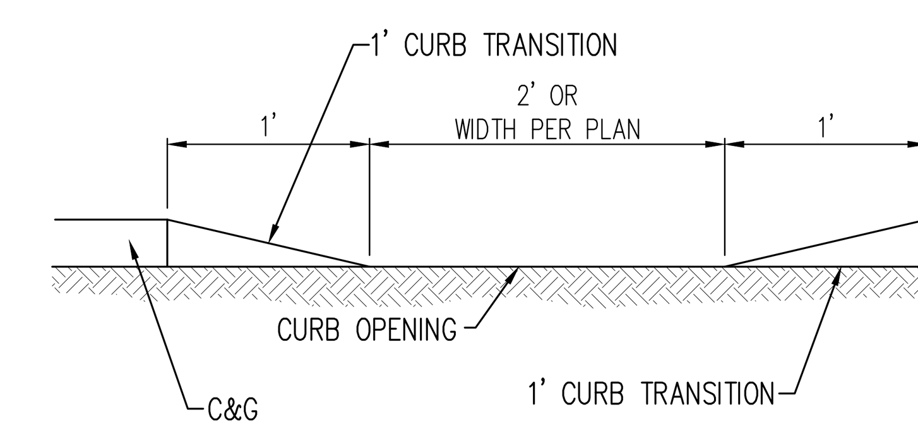
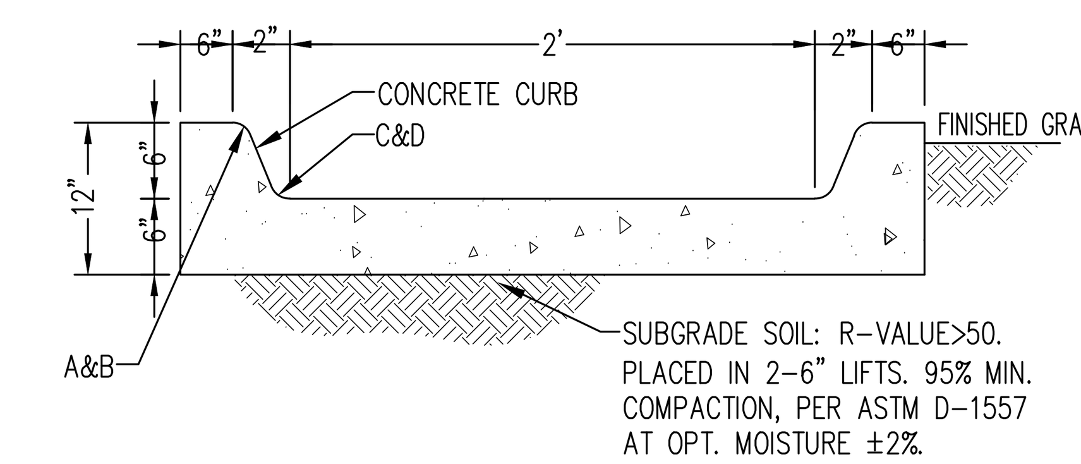


◇ GRADING KEYNOTES

1. INSTALL HDPE (N12 WT, OR APPROVED EQUAL) STORM DRAIN PIPE (SIZE PER PLAN)
2. INSTALL 18" NYLOPLAST STORM DRAIN INLET OR APPROVED EQUAL PER MANUFACTURES SPECIFICATIONS.
3. INSTALL PRE-FABRICATED STORM DRAIN FITTING, EXTEND 6" LINE.
4. STUB PROPOSED ROOF DRAIN CONNECTIONS WITHIN 5' OF THE BUILDING; SEE PLUMBING PLANS FOR CONTINUATION. CONNECT TO MAIN W/ PRE-MANUFACTURED STORM DRAIN FITTING.
5. INSTALL RETAINING WALL; SEE ARCHITECTURAL/STRUCTURAL PLANS FOR DETAILS
6. INSTALL CURB OPENING PER DETAIL A1, SHEET C1.00.
7. DAYLIGHT STORM DRAIN IN WALL INTO CURB AND GUTTER OF PARKING AREA.
8. INSTALL 3' WIDE CONCRETE VALLEY GUTTER PER COA STD. DWG. 2421
9. INSTALL 24" SIDEWALK CULVERT PER COA STD. DWG. 2236
10. INSTALL TYPE 'C' MANHOLE PER COA STD. DWG. 2101
11. INSTALL PRE-FABRICATED STORM DRAIN FITTING, EXTEND 6" LINE. SEE HARDSCAPE PLANS FOR EXACT LOCATION OF FIRE PIT INLET.
12. INSTALL 24" CONCRETE RUNDOWN PER DETAIL A2, SHEET C1.00.
13. INSTALL 1' CURB TRANSITION FROM FLUSH CURB TO 6" CURB.



A1 TYPICAL CURB OPENING
NOT TO SCALE



CROSS SECTION VIEW

A. ±0.75" RADIUS.

B. DIMENSIONS AT ROUNDED CORNERS MEASURED TO INTERSECTION OF STRAIGHT LINES.

C. ±2" RADIUS.

D. DIMENSIONS AT ROUNDED CORNERS MEASURED TO INTERSECTION OF STRAIGHT LINES.

A2 CONCRETE RUNDOWN
NOT TO SCALE

N

1"=10'

GRADING LEGEND

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING GROUND SPOT ELEVATION
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED FLOW LINE
- PROPOSED FINISHED GRADE SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW FFG=FINISH FLOOR GARAGE FFC=FINISH FLOOR CARRIAGE FGD=FINISH GROUND DRIVEWAY
- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT
- FF STEP

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Titan Development
Alliance Residential Company
Bohannan Huston
www.bhinc.com 800.877.5332

REVISIONS

No.	Date	Description
1	8/30/17	1ST CITY REVIEW
2	8/30/17	DESIGN TEAM COORDINATION
3	10/12/17	2ND CITY REVIEW
4	10/12/17	DESIGN TEAM COORDINATION
5	05/18/18	3RD CITY REVIEW/OWNER CHANGES
7	8/10/18	4TH CITY REVIEW/COORDINATION

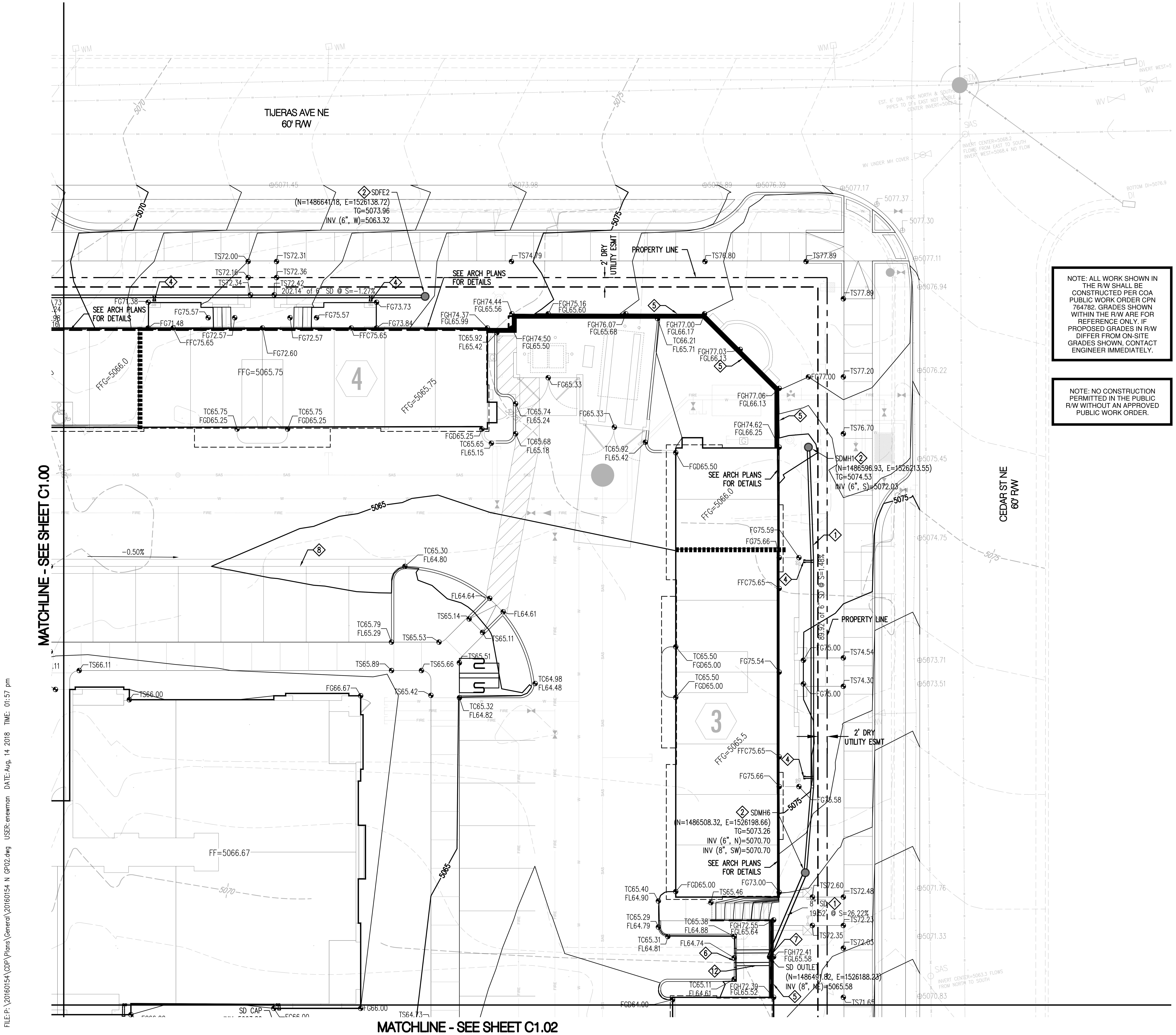
4TH CITY SUBMITTAL

DATE: AUGUST 10, 2018 ORB # 16-210

C1.00

OVERALL GRADING PLAN

FILE: P:\20160154\CDP\Plans\General\20160154 N GP01.dwg USER: enewman DATE: Aug. 14 2018 TIME: 01:16 pm



NOTE: ALL WORK SHOWN IN THE R/W SHALL BE CONSTRUCTED PER COA PUBLIC WORK ORDER CPN 764782. GRADES SHOWN WITHIN THE R/W ARE FOR REFERENCE ONLY. IF PROPOSED GRADES IN R/W DIFFER FROM ON-SITE GRADES SHOWN, CONTACT ENGINEER IMMEDIATELY.

NOTE: NO CONSTRUCTION PERMITTED IN THE PUBLIC R/W WITHOUT AN APPROVED PUBLIC WORK ORDER.

FILE: P:\20160154\CDP\Plans\General\20160154 N GP02.dwg USER: enewman DATE: Aug. 14 2018 TIME: 01:57 pm

◇ GRADING KEYNOTES

1. INSTALL HDPE (N12 WT, OR APPROVED EQUAL) STORM DRAIN PIPE (SIZE PER PLAN)
2. INSTALL 18" NYLOPLAST STORM DRAIN INLET OR APPROVED EQUAL PER MANUFACTURES SPECIFICATIONS.
3. INSTALL PRE-FABRICATED STORM DRAIN FITTING, EXTEND 6" LINE.
4. STUB PROPOSED ROOF DRAIN CONNECTIONS WITHIN 5' OF THE BUILDING; SEE PLUMBING PLANS FOR CONTINUATION. CONNECT TO MAIN W/ PRE-MANUFACTURED STORM DRAIN FITTING.
5. INSTALL RETAINING WALL; SEE ARCHITECTURAL/STRUCTURAL PLANS FOR DETAILS
6. INSTALL CURB OPENING PER DETAIL A1, SHEET C1.00.
7. DAYLIGHT STORM DRAIN IN WALL INTO CURB AND GUTTER OF PARKING AREA.
8. INSTALL 3' WIDE CONCRETE VALLEY GUTTER PER COA STD. DWG. 2421
9. INSTALL 24" SIDEWALK CULVERT PER COA STD. DWG. 2236
10. INSTALL TYPE 'C' MANHOLE PER COA STD. DWG. 2101
11. INSTALL PRE-FABRICATED STORM DRAIN FITTING, EXTEND 6" LINE. SEE HARDSCAPE PLANS FOR EXACT LOCATION OF FIRE PIT INLET.
12. INSTALL 24" CONCRETE RUNDOWN PER DETAIL A2, SHEET C1.00.
13. INSTALL 1' CURB TRANSITION FROM FLUSH CURB TO 6" CURB.

N

10 5 0 10
1"=10'

GRADING LEGEND

PROPERTY LINE	PROPOSED CURB & GUTTER
PROJECT LIMITS OF GRADING	DIRECTION OF FLOW
5025 EXISTING INDEX CONTOUR	WATER BLOCK/GRADE BREAK
5024 EXISTING INTERMEDIATE CONTOUR	SD PROPOSED STORM DRAIN LINE
5025.25 EXISTING GROUND SPOT ELEVATION	PROPOSED STORM DRAIN MANHOLE
5025 PROPOSED INDEX CONTOUR	PROPOSED STORM DRAIN INLETS
5024 PROPOSED INTERMEDIATE CONTOUR	PROPOSED RETAINING WALL
PROPOSED FLOW LINE	EASEMENT
26.75 PROPOSED FINISHED GRADE SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW FFG=FINISH FLOOR GARAGE FFC=FINISH FLOOR CARRIAGE FGD=FINISH GROUND DRIVEWAY	FF STEP

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ALLIANCE RESIDENTIAL COMPANY
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REVISIONS

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3	10/12/17	2ND CITY REVIEW
4	10/12/17	DESIGN TEAM COORDINATION
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7	8/10/18	4TH CITY REVIEW/COORDINATION

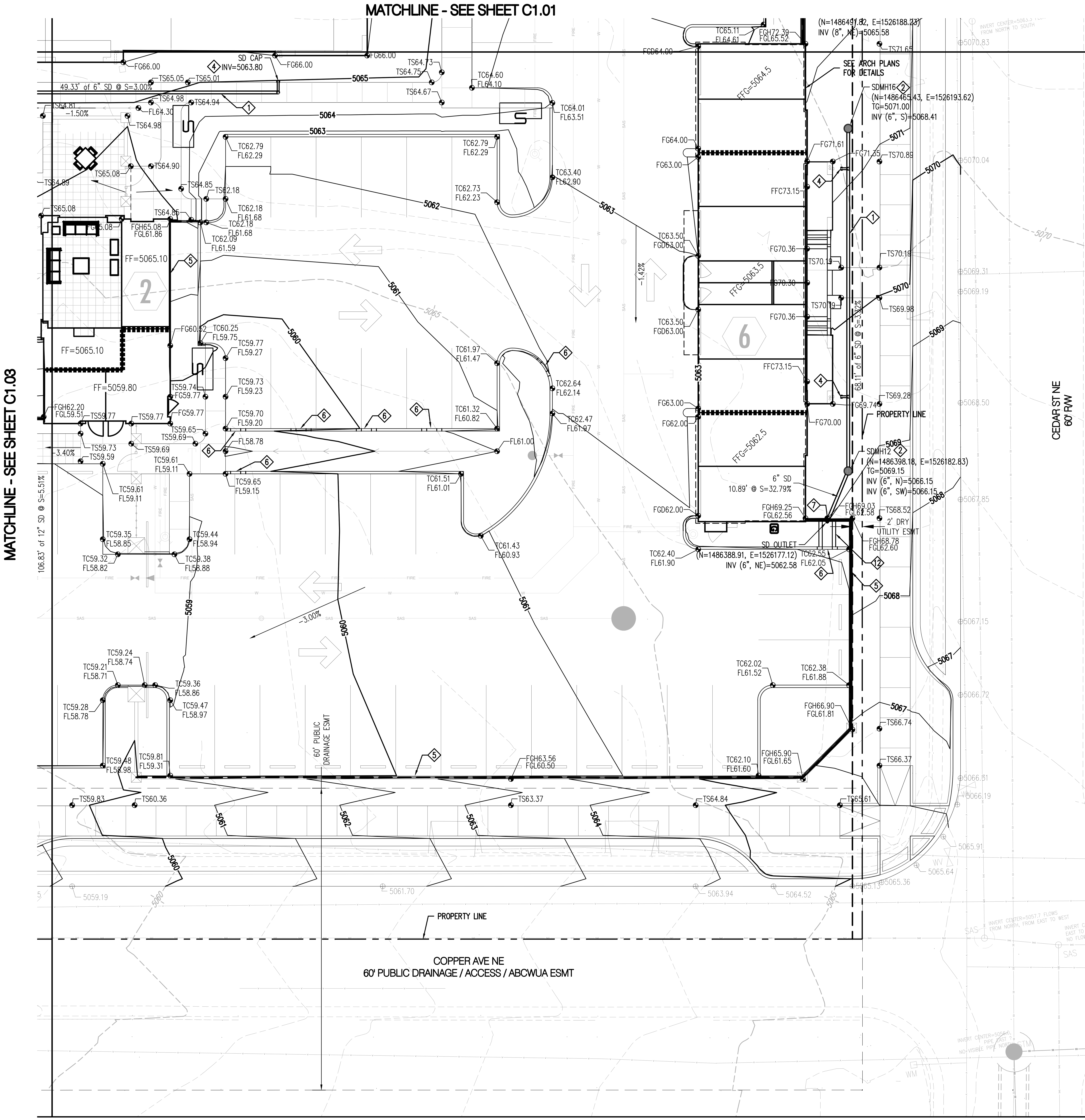
4TH CITY SUBMITTAL

DATE: AUGUST 10, 2018 ORB # 16-210

7

C1.01

OVERALL GRADING PLAN



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13. INSTALL 1' CURB TRANSITION FROM FLUSH CURB TO 6" CURB.

N

1"=10'

GRADING LEGEND

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- 5025 EXISTING INDEX CONTOUR
- 5024 EXISTING INTERMEDIATE CONTOUR
- 5025.25 EXISTING GROUND SPOT ELEVATION
- 5025 PROPOSED INDEX CONTOUR
- 5024 PROPOSED INTERMEDIATE CONTOUR
- PROPOSED FLOW LINE
- 26.75 PROPOSED FINISHED GRADE SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW FFG=FINISH FLOOR GARAGE FFC=FINISH FLOOR CARRIAGE FGD=FINISH GROUND DRIVEWAY
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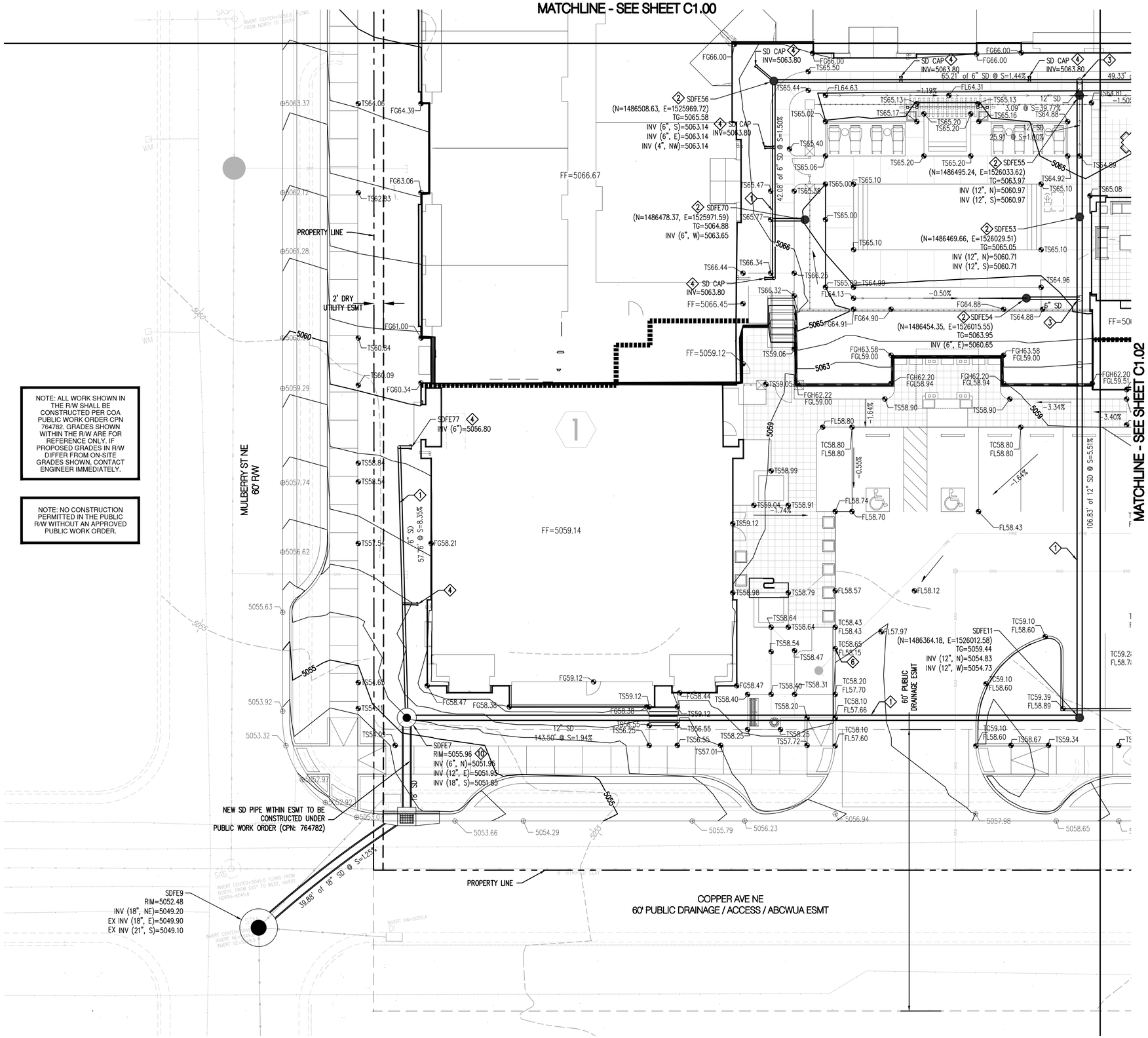
4TH CITY SUBMITTAL

DATE: AUGUST 10, 2018 ORB # 16-210

C1.02

OVERALL GRADING PLAN



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N

10 5 0 10

1"=10'

GRADING LEGEND

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- PROJECT LIMITS OF GRADING
- 5025 EXISTING INDEX CONTOUR
- 5024 EXISTING INTERMEDIATE CONTOUR
- 5025.25 EXISTING GROUND SPOT ELEVATION
- 5025 PROPOSED INDEX CONTOUR
- 5024 PROPOSED INTERMEDIATE CONTOUR
- PROPOSED FLOW LINE
- 26.75 PROPOSED FINISHED GRADE SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW FFG=FINISH FLOOR GARAGE FFC=FINISH FLOOR CARRIAGE FGD=FINISH GROUND DRIVEWAY
- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- 60 PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT
- FF STEP

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4TH CITY SUBMITTAL

DATE: AUGUST 10, 2018 ORB # 16-210

7

C1.03

OVERALL GRADING PLAN

FILE:P:\20160154\CDP\Plans\General\20160154 N GP04.dwg USER:enewman DATE:Aug, 14 2018 TIME: 02:18 pm

TREASURY DIVISION DAILY DEPOSIT

Transmittals for:
PROJECTS Only

City of Albuquerque Treasury
J-24 Deposit
Date: 11/13/2017 Office: ANNEX
Station ID Cashier: E29569
Batch: 8671 Trans: 15
Fund: 305 Activity ID7547210
Account: 461615 Project ID24_MS4
Dept ID: Bus.Unit: PCDMD
Alloc Amt: $21,312.00
Trans Amt: $21,312.00
Check Tendered : $21,312.00

Payment In-Lieu for Storm Water Quality Volume Requirement

CASH COUNT	AMOUNT	ACCOUNT NUMBER	FUND NUMBER	BUSINESS UNIT	PROJECT ID	ACTIVITY ID	AMOUNT
TOTAL CHECKS	$ 21,312.00	461615	305	PCDMD	24_MS4	7547210	$ 21,312.00
TOTAL AMOUNT						TOTAL DEPOSIT	**$21,312.00**

Hydrology#: K15D034A Name: Broadstone Highlands (North Block)
Payment In-Lieu For Storm Water Quality Volume Requirement

Address/Legal Description: Tract 1, The Highlands

DEPARTMENT NAME: Planning Department/Development Review Services, Hydrology

PREPARED BY Dana Peterson PHONE 924-3695

BUSINESS DATE _____

DUAL VERIFICATION OF DEPOSIT _____
EMPLOYEE SIGNATURE

AND BY _____
EMPLOYEE SIGNATURE

REMITTER: _____
AMOUNT: _____
BANK: _____
CHECK #: _____ DATE ON CHECK: _____

The Payment-in-Lieu can be paid at any City of Albuquerque Treasury location. **Bring three copies of this invoice to Treasury.** The most convenient may be at Plaza del Sol, 600 2nd St. NW. Provide a copy of the receipt to Hydrology, Suite 201 600 2nd St. NW, or e-mail with the Hydrology submittal to PLNDRS@cabq.gov.