



LOCATION MAP

SCALE: 1" = 1000'±

ZONE ATLAS MAP G-14-Z

FERMette # 35001C0332G ZONE X PROTECTED BY LEVEE

Patz's Warehouse/Apartment

406 Veranda Rd N.W.

Engineer: Logan Patz EIT

I. EXECUTIVE SUMMARY

THIS PLAN SERVES TO SUPPORT THE PROPOSED DEVELOPMENT FOR LOGAN PATZ. THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE AND IS LOT: 18 BLOCK: 17 SUBDIVISION: MONKBRIDGE. THE SUBDIVISION IS LOCATED OFF THE FOURTH STREET CORRIDOR NORTH OF 140. THE SITE ADDRESS IS 406 VERANDA RD. THE PROPOSED CONSTRUCTION CONSISTS OF A NEW BUILDING, UTILITIES, GRADING IMPROVEMENTS, PARKING LOT, WALKWAYS, LANDSCAPING AND OTHER AMENITIES AS REQUIRED FOR A FULLY FUNCTIONAL SITE. OFF-SITE CONSTRUCTION WILL INCLUDE SIDEWALK, AND DRIVE PAD. MOST LOTS IN THE SUBDIVISION ARE DEVELOPED INCLUDING THE LOTS SURROUNDING THIS LOT. THE LOTS TO THE SOUTH AND WEST ARE SEPARATED BY CINDERBLOCK WALLS AND THE LOT TO THE EAST IS SERRATED BY A RAISED 6 INCH CURB. ALSO STREET PAVEMENT, CURB AND GUTTER, PUBLIC UTILITIES ARE IN PLACE. DUE TO THESE DEVELOPMENTS, OFF-SITE STORM WATER SHOULD NOT IMPACT THIS SITE. IT IS PROPOSED THAT STORMWATER GENERATED ON-SITE WILL BE CAPTURED IN RETENTION BASINS ON-SITE TO THE REQUIRED FIRST 0.5 INCH OF RUNOFF AS ALLOWED IN THE AMENDMENTS TO THE DEVELOPMENT PROCESS MANUAL (DPM) SECTION 4, 22.4.3.

II. PROJECT DESCRIPTION

AS SHOWN ON THE LOCATION MAP THE SITE (10,200 SF = APPROXIMATELY 0.23 ACRES) IS LOCATED IN THE CITY OF ALBUQUERQUE AT 406 VERANDA RD. CURRENTLY THE SITE IS UNDEVELOPED.

III. EXISTING CONDITIONS

CURRENTLY THE SITE IS UNDEVELOPED, THERE IS VERY LITTLE TO NO VEGETATION ON THE PROJECT SITE. THE STORMWATER IS CURRENTLY RETAINED ONSITE WHERE THE OLD STRUCTURES WERE REMOVED.

IV. DEVELOPED CONDITIONS

THE PROPOSED ON-SITE CONSTRUCTION CONSISTS OF A NEW BUILDING, UTILITIES, GRADING AND DRAINAGE IMPROVEMENTS, PARKING LOT, WALKWAYS, LANDSCAPING AND OTHER AMENITIES. OFF-SITE CONSTRUCTION WILL INCLUDE SIDEWALK AND DRIVE PAD. IT IS PROPOSED THE STORMWATER GENERATED ON-SITE WILL BE CAPTURED ON-SITE IN THE GRADED RETENTION BASINS. STORMWATER BEYOND THE CHANNELS CAPACITY WILL CONVEY FROM THE DRIVE PAD TO THE STREET.

V. EROSION CONTROL

CURRENTLY NO HARD SURFACES EXIST AT THE SITE. AFTER DEVELOPMENT APPROXIMATELY 69.2% OF THE SITE WILL BE MADE-UP OF ASPHALT AND ROOFTOP. THE PROPOSED CONSTRUCTION WILL INCREASE THE AMOUNT OF IMPERVIOUS AREA. PERMANENT EROSION CONTROL IN THE CHANNELS WILL CONSIST OF VEGETATION AND COBBLE STONE.

VI. WATER QUALITY ENHANCEMENTS

WATER QUALITY ENHANCEMENTS PROPOSED ARE TO RETAIN THE FIRST 0.5 INCH OF A RAIN EVENT ON-SITE AND THE DUMPSTER PAD WILL DRAIN INTO THE WEST POND.

VII. GRADING PLAN

THE GRADING PLAN SHOWS:

1. EXISTING SPOT ELEVATIONS AS TAKEN FROM A RECENT TOPOGRAPHY WITH AN ASSUMED ELEVATION OF 4962.40' AT THE ¾" ROD FOUND AT THE EAST PROPERTY LINE 90' FROM THE NORTHEAST CORNER.
2. THE PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOUR LINES
3. THE LIMITS AND CHARACTER OF THE EXISTING FEATURES
4. THE LIMITS AND CHARACTER OF THE PROPOSED IMPROVEMENTS
5. CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES

IIIV. CALCULATIONS

THE CALCULATIONS HEREON ANALYZE THE HYDROLOGY FOR THE EXISTING AND DEVELOPED CONDITIONS UPON A 100 YEAR, 24-HOUR RAINFALL EVENT. PROCEDURE FOR 40 ACRES AND SMALLER BASIN, AS SET FORTH IN CHAPTER 22 OF THE DEVELOPMENT PROCESS MANUAL (DPM). VOLUME II, 2015 REVISIONS WAS USED TO QUANTIFY THE PEAK RATE OF DISCHARGE (Q) AND VOLUME (V) OF ON-SITE STORMWATER RUN-OFF. ALL DATA UTILIZED CAN BE FOUND BELOW.

HYDROLOGY ANALYSIS FOR PEAK RATE OF DISCHARGE (Q) AND PEAK VOLUME (V):

SITE CHARACTERISTICS:

DRAINAGE AREA = (SEE PRE AND POST -DEVELOPMENT MAP)

LAND TREATMENT (DPM CH. 22, TABLE A-4)

IMPERVIOUS = D

PERVIOUS = C

PRECIPITATION ZONE = 2 (DPM CH. 22, TABLE A-1)

(Q) = CIA = 100-YR, PEAK DISCHARGE FOR ZONE 2; (TAKEN FROM CHAPTER 22 OF THE DPM VOLUME II TABLE A-11 AND A-10)

PERVIOUS	IMPERVIOUS
C = 0.62	C = 0.93
I = 5.05	I = 5.05

100-YR., 24-HOUR VOLUME (V) =

[6-HOUR VOL. +IMPERVIOUS AREA]*[24-HOUR RECIP. - 6 HOUR PRECIP.]

12 IN/FT

FOR ZONE 2:

6 HOUR VOL. = (WEIGHTED EXCESS PRECIPITATION)*(LAND TREATMENT) EXCESS PRECIPITATION FOR 100-YR. 6-HOUR STORM CAN BE FOUND IN TABLE A-8 OF DPM. CH 22.

24-HOUR PRECIPITATION = 2.75 (DPM CH. 22, TABLE A-2)

6-HOUR PRECIPITATION = 2.35 (DPM CH. 22, TABLE A-2)

DRAINAGE AREA - PRE-DEVELOPMENT

10,200 SF = 100% PERVIOUS

ANALYSIS RESULTS

Q = 0.74 CFS (100 YR)

V = 960 CF (100 YR)

DRAINAGE AREA - POST-DEVELOPMENT

3,262.64 SF ROOF RAIN WATER VOLUME WILL BE HARVESTED ON-SITE
Therefore, (10,200 SF - 3,262.64 SF = 6,937.36 SF ~ 0.159 ac)

(10,200 - 3,140 - 3,262.64) = 3,797.36 SF = 54.74% IMPERVIOUS

3,140 SF = 45.26% PERVIOUS

ANALYSIS RESULTS

Q = 0.64 CFS ≤ 0.64 CFS (2.75 CFS/ACRE)

V = 965 CF (576.71 CF WILL BE RETAINED ON-SITE)

HYDRAULIC ANALYSIS FOR CAPACITY (Q) OF SITE DRAINAGE AMENITIES:

STEEL ROOF DRAIN CAPACITY (Q):

PIPE ROUGHNESS (n) = 0.012

PIPE FLOW AREA (A) = 0.196 sf

HYDRAULIC RADIUS (R) = 0.148 ft.

PIPE SLOPE (S) = .0208 ft./ft. (MIN)

Q = (1.49/n)(A)(R^0.667)(S^0.5) = 0.98 cfs

RETENTION PONDS AND CHANNEL VOLUME (V) CALCULATIONS:

ALL RETENTION AREAS DESIGNED WITH SLOPE LESS THAN 2H:1V SIDE SLOPES. THE TOTAL VOLUMES ARE CALCULATED AS FOLLOWS;

WEST POND, POLYGONAL CHARACTERISTICS:

BOTTOM PERIMETER AREA = 0.73 SF

TOP PERIMETER AREA = 78.90 SF

DEPTH = 2.0'

V = (1/2)[(78.90 SF + 0.73 SF)(2.0 FT)] = 79.6 CF

WEST CHANNEL: PYRAMID METHOD

NORTHWEST AREA = 2.88 SF

LENGTH ~ 40.6 FT, DEPTH 1.2 FT, WIDTH 4.8 FT

V = [(2.88)(40.6)]/3 = 39 CF

EAST CHANNEL: AVERAGE END AREA METHOD

NORTHWEST, WEST END AREA = 7.5 SF

NORTHWEST, EAST END AREA = 4.8 SF

LENGTH = 20 FT, DEPTHS 1.5' & 1.2, WIDTH 10' & 8'

V = [(7.5 + 4.8)/2](20) = 123 CF

NORTHEAST, NORTH END AREA = 4.8 SF

NORTHEAST, SOUTH END AREA = 1 SF

LENGTH = 110', DEPTHS 1.2' & 0.5' WIDTHS 8' & 4'

V = [(4.8 + 1)/2](45) = 130.5 CF

SOUTHEAST, NORTH END AREA = 1 SF

SOUTHEAST, SOUTH END AREA = 0.08 SF

LENGTH = 110 FT, DEPTH 0.5' & 0.2' WIDTH 4' & 0.4'

V = [(1 + 0.08)/2](110) = 59.4 CF

SOUTHWEST, WEST END AREA = 4.4 SF

SOUTHWEST, EAST END ARS = 4.4 SF

LENGTH = 33 FT, DEPTH 1.0', WIDTH 8.8'

V = [(4.4+4.4)/2](33) = 145 CF

TOTAL RETENTION VOLUME:

[79.6 + 39 + 123 + 130.5 + 59.4 + 145.2] = 576 CF

IX. STORM WATER CONTROL MEASURES

TO MANAGE THE FIRST ½" OF RUN-OFF IN ORDER TO PREVENT A CONCENTRATION OF POLLUTANTS FROM RUNNING OFF-SITE A RETENTION CHANNEL IS PROPOSED ON-SITE. THE VOLUME OF SAID RETENTION CHANNEL IS AS FOLLOWS:

FIRST ½" VOL. = SITE AREA X 0.5 INCHES = 425 CF

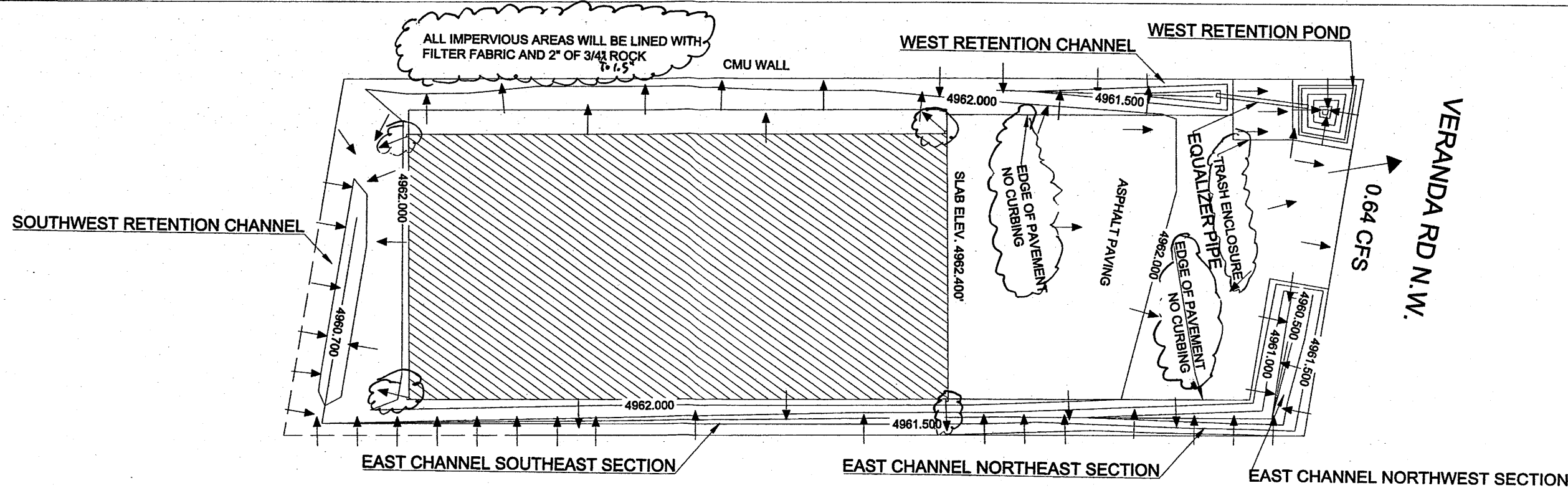
RETENTION = 576 CF

425 CF (FIRST ½") - 576 CF (RETENTION) ≤ 0 (FIRST ½" MET)

THE DUMPSTER PAD WILL DRAIN INTO THE WEST POND AREA.

X. CONCLUSION

THIS PLAN SUPPORTS THE PROPOSED DEVELOPMENT. THE PROPOSED STORM DRAINAGE FACILITIES WILL ADEQUATELY RETAIN AND CONVEY STORMWATER GENERATED ON-SITE BY A 100 YEAR, 24-HOUR STORM EVENT. ALSO, IF CONSTRUCTED IN ACCORDANCE WITH THE ASSOCIATED GRADING AND DRAINAGE PLAN, THE SITE HYDRAULICS WILL RETAIN 576.71 CF OF STORMWATER RUN OFF ON-SITE. THIS IS MORE THAN THE REQUIRED RETENTION OF THE FIRST 0.5 INCH OF RAINFALL TO BE CAPTURED IN THE VALLEY AND FLOWS ARE AT 0.635 CFS LESS THAN THE 2.75 CFS/ACRE.

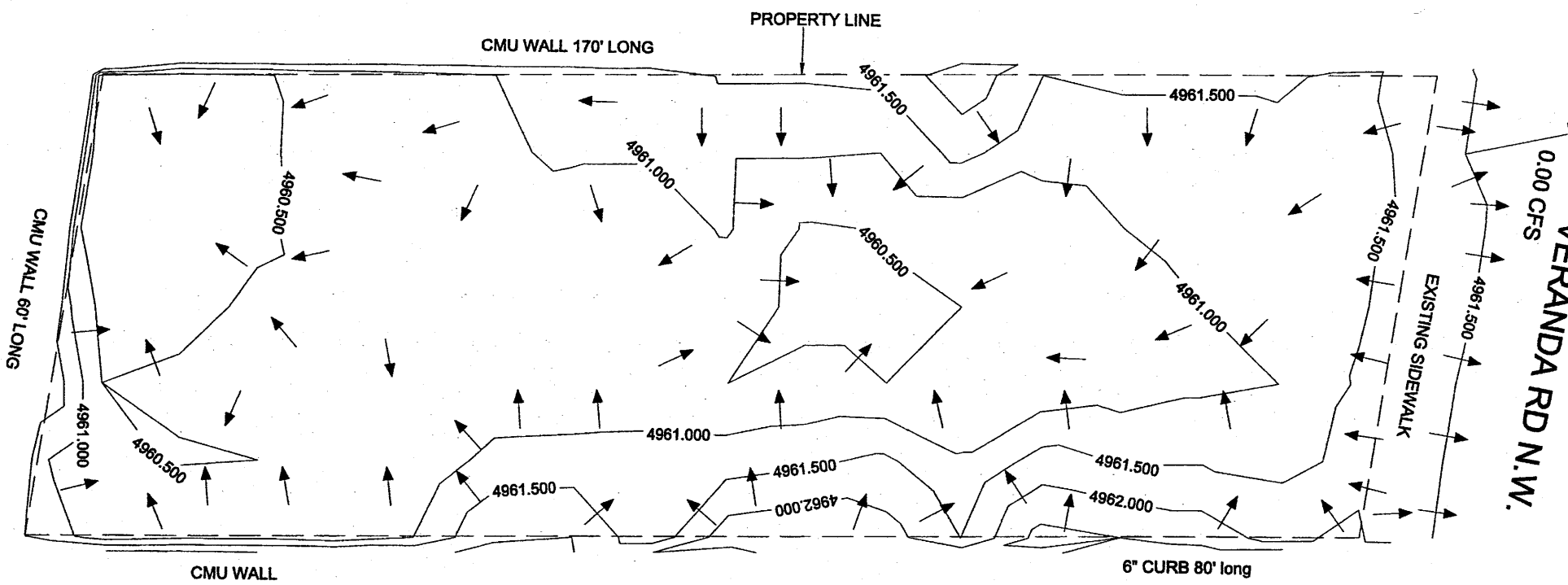


DRAINAGE AREA POST-DEVELOPMENT

MAP SCALE 1" = 20'

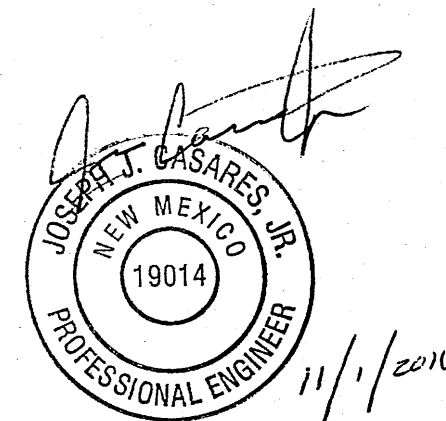


NOTE:
ROOF WATER IS
HARVESTED ON-SITE
FROM THE 4
DOWNSPOUTS TO THE
CHANNELS



DRAINAGE AREA PRE-DEVELOPMENT

MAP SCALE 1" = 20'



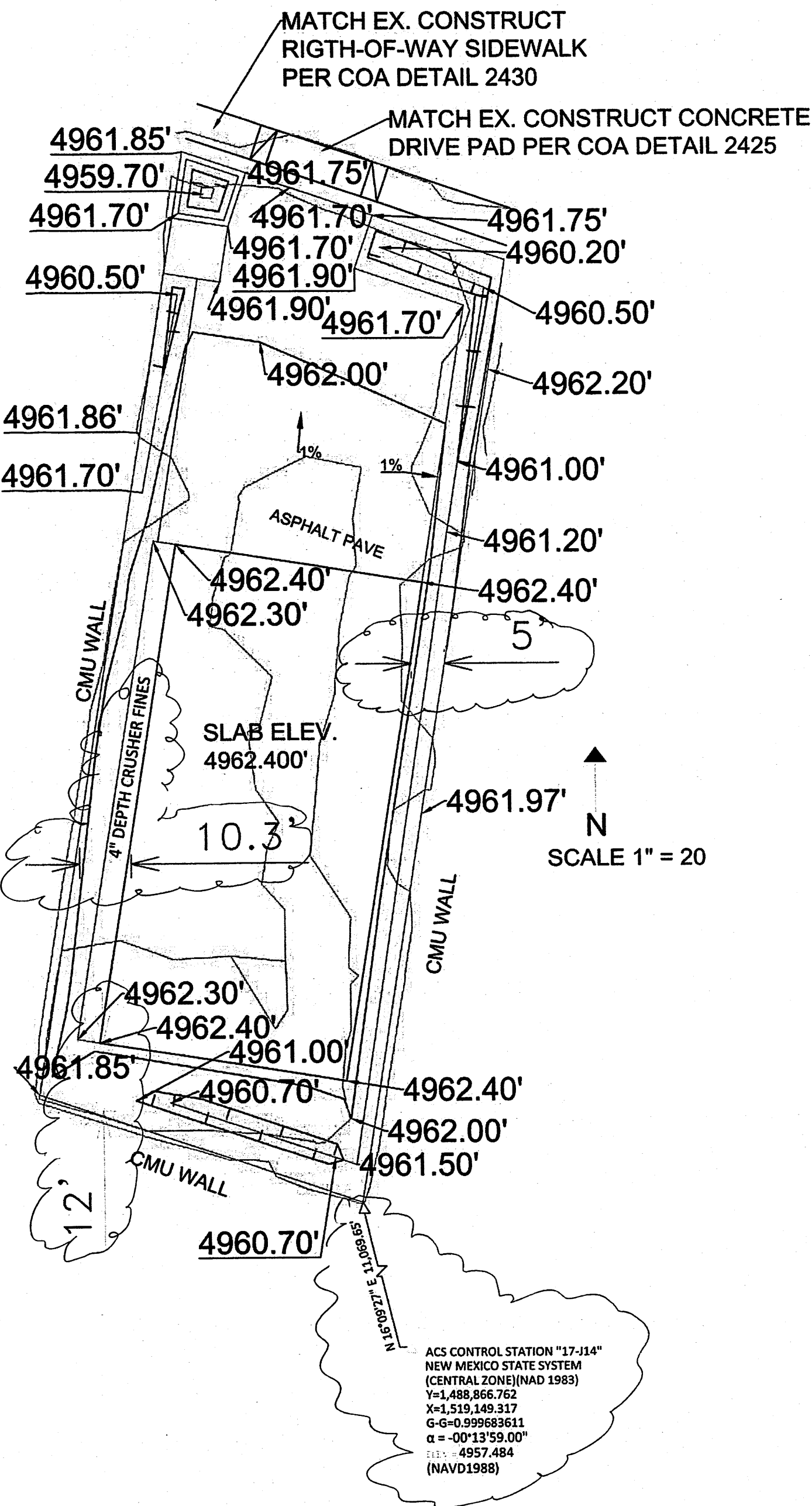
PATZ - WHAREHOUSE/APPARTMENT
406 VERANDA RD N.W.
DATE: 08-08-2016
PROJECT #: 2016-00557

GRADING & DRAINAGE GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT. EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AND THE CITY OF ALBUQUERQUE SPECIFICATIONS
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (250-1990), FOR LOCATION OF EXISTING UTILITIES CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES AND OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR WILL NOTIFY THE OWNER IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THIS WORK IS CONSIDERED INCIDENTAL TO THE PROJECT AND NO DIRECT PAYMENT WILL BE MADE THEREFOR.
4. ALL EXCAVATION SHALL BE GOVERNED BY FEDERAL, STATE, AND LOCAL LAW, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH, OSHA 29 CFR 1926.650. ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KNOW AND COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970"
6. CONTRACTOR SHALL SCARIFY TO A DEPTH OF 8" AND RE-COMPACT SUBGRADE TO 95% MAX. DENSITY AS DETERMINED BY ASTM D-1557 UNLESS NOTED OTHERWISE IN GEOTECH REPORT.
7. CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING BORROW MATERIAL OR HAULING OFF EXCESS MATERIAL THE TRANSPORTATION AND/OR DISPOSAL OF THESE MATERIALS SHALL BE CONSIDERED REUSED MUST BE REMOVED FROM THE PROJECT AREA WITHIN FOUR (4) DAYS OF EXCAVATION.
8. NO SEPARATE PAYMENT WILL BE MADE FOR ANY HAULING OR DISPOSAL OF MATERIAL THE TRANSPORTATION AND/OR DISPOSAL OF MATERIAL SHALL BE CONSIDERED INCIDENTAL TO PROJECT.
9. WHEN ABUTTING NEW CONCRETE TO EXISTING, CUT BACK EXISTING TO A NEAT STRAIGHT LINE AS REQUIRED TO REMOVE ANY BROKEN OR CRACKED CONCRETE, AND MATCH NEW TO EXISTING. NO SEPARATE PAYMENT SHALL BE MADE FOR SAW CUTTING OF EXISTING PAVEMENT OR CONCRETE BUT SHALL BE CONSIDERED INCIDENTAL TO PROJECT. CUTTING OF PAVEMENT OR CONCRETE SHALL BE IN CONFORMANCE WITH PROJECT SPECIFICATIONS.
10. EXERCISE CARE TO AVOID DISTURBING EXISTING, UTILITIES. COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED RELOCATIONS, AND IN ORDER TO PREVENT ANY SERVICE DISRUPTIONS.
11. CONTRACTOR SHALL PROVIDE REASONABLE ACCESS TO TEMPORARY FACILITIES WITHIN THE PROJECT AREA DURING CONSTRUCTION.
12. WATERING FOR DUST CONTROL, AS REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR. CONSTRUCTION AREAS SHALL BE WATERED OR OTHERWISE KEPT DUST FREE. THE CONTRACTOR SHALL USE WATERING EQUIPMENT FOR DUST POLLUTION ABATEMENT AS DIRECTED BY THE OWNER.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL DEMOLITION DEBRIS, WORK MATERIAL SHALL BE DISPOSED OF IN A CITY APPROVED WASTE AREA, IN ACCORDANCE WITH ALBUQUERQUE SPECIFICATIONS, SECURED BY AND AT THE EXPENSE OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED UTILITY LINES THAT ARE EXPOSED AS A RESULT OF CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE ARCHITECT.
15. THE CONTRACTOR AGREES TO TAKE NECESSARY SAFETY PRECAUTIONS AS REQUIRED BY FEDERAL STATE AND LOCAL AUTHORITIES TO PROTECT PEDESTRIANS AND VEHICULAR TRAFFIC IN THE CONSTRUCTION AREA, WHICH INCLUDES BUT ARE NOT LIMITED TO: MAINTAINING ADEQUATE WARNING SIGNS, BARRICADES, LIGHTS, GUARD FENCES, WALK AND BRIDGES.
16. CONTRACTOR SHALL ADJUST CLEANOUT RIMS, VALVE CANS, GRATES AND MH COVER LIDS AS NEEDED TO MATCH FINISHED ELEVATIONS.
17. CONTRACTOR'S YARD AND ANY OTHER AREAS DISTURBED BY THE CONTRACTOR NOT INCLUDED ON THE PLANS, SHALL BE RE-ESTABLISHED TO OWNERS SATISFACTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO PROJECT AND NO MEASUREMENT OR PAYMENT WILL BE MADE THEREFOR.
18. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND ADHERING TO A STORMWATER POLLUTION PREVENTION PLAN AS REQUIRED.
19. SAFETY RAILS ARE REQUIRED AT ALL LOCATIONS ADJACENT TO A PEDESTRIAN WALKWAY WHERE A VERTICAL DROP OF 24" OR MORE EXISTS, OR AS APPLICABLE PER GOVERNING BUILDING CODE.
20. COORDINATE IMPROVEMENTS SHOWN ON THIS PLAN WITH THE ARCHITECT'S SITE PLAN COORDINATE ANY DEPENDENCIES WITH THE OWNER
21. SITE SURVEY IS COORDINATED WITH THE PLOT SURVEY AND TIED TO THE 3/4" ROD FOUND AT THE EDGE OF THE PROPERTY LINE 90' FROM THE NORTHEAST CORNER.
22. GRADES SHOWN ARE FINISHED ELEVATIONS.
23. ALL IMPERVIOUS AREA WILL HAVE FILTER FABRIC WITH 2" OF 3/4" ROCK UNLESS NOTED OTHERWISE.

FACILITIES WITHIN THE ROW NOTICE TO CONTRACTOR (SO-19)

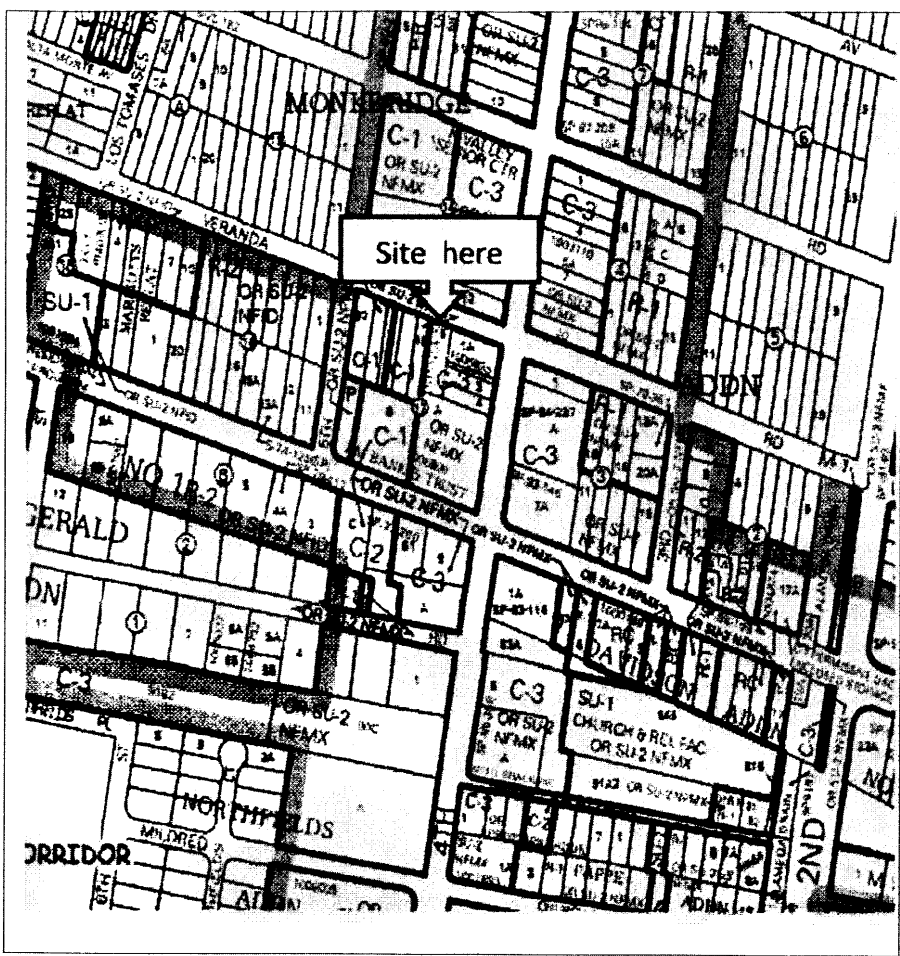
1. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE RIGHT -OF-WAY.
2. ALL WORK IN THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT THE LINE LOCATION SERVICES, NEW MEXICO ONE CALL 260-1990 (NM ONE CALL "811") FOR THE LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL EXISTING OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER/OWNER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO STREET USE.
6. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.



JOSEPH J. CASARES, JR.
NEW MEXICO
19014
PROFESSIONAL ENGINEER

SIGNATURE _____ DATE _____

PATZ - WHAREHOUSE/APPARTMENT
406 VERANDA RD N.W.
DATE: 08-08-2016
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SCALE: 1" = 1000'±

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THE GRADING PLAN SHOWS:

1. EXISTING SPOT ELEVATIONS AS TAKEN FROM A RECENT TOPOGRAPHY WITH AN ASSUMED ELEVATION OF 4962.40' AT THE ¾" ROD FOUND AT THE EAST PROPERTY LINE 90' FROM THE NORTHEAST CORNER.
2. THE PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOUR LINES
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THE CALCULATIONS HEREON ANALYZE THE HYDROLOGY FOR THE EXISTING AND DEVELOPED CONDITIONS UPON A 100 YEAR, 24-HOUR RAINFALL EVENT. PROCEDURE FOR 40 ACRES AND SMALLER BASIN, AS SET FORTH IN CHAPTER 22 OF THE DEVELOPMENT PROCESS MANUAL (DPM). VOLUME II, 2015 REVISIONS WAS USED TO QUANTIFY THE PEAK RATE OF DISCHARGE (Q) AND VOLUME (V) OF ON-SITE STORMWATER RUN-OFF. ALL DATA UTILIZED CAN BE FOUND BELOW.

HYDROLOGY ANALYSIS FOR PEAK RATE OF DISCHARGE (Q) AND PEAK VOLUME (V):

SITE CHARACTERISTICS:

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LAND TREATMENT (DPM CH. 22, TABLE A-4)

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[6-HOUR VOL. +IMPERVIOUS AREA]*[24-HOUR RECIP. - 6 HOUR PRECIP.]

12 IN/FT

FOR ZONE 2:

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24-HOUR PRECIPITATION = 2.75 (DPM CH. 22, TABLE A-2)

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TOP PERIMETER AREA = 78.90 SF

DEPTH = 2.0'

V = (1/2)[(78.90 SF + 0.73 SF)(2.0 FT)] = 79.6 CF

WEST CHANNEL: PYRAMID METHOD

NORTHWEST AREA = 2.88 SF

LENGTH ~ 40.6 FT, DEPTH 1.2 FT, WIDTH 4.8 FT

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NORTHWEST, WEST END AREA = 7.5 SF

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NORTHEAST, SOUTH END AREA = 1 SF

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V = [(4.8 + 1)/2](45) = 130.5 CF

SOUTHEAST, NORTH END AREA = 1 SF

SOUTHEAST, SOUTH END AREA = 0.08 SF

LENGTH = 110 FT, DEPTH 0.5' & 0.2' WIDTH 4' & 0.4'

V = [(1 + 0.08)/2](110) = 59.4 CF

SOUTHWEST, WEST END AREA = 4.4 SF

SOUTHWEST, EAST END ARES = 4.4 SF

LENGTH = 33 FT, DEPTH 1.0', WIDTH 8.8'

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TOTAL RETENTION VOLUME:

[79.6 + 39 + 123 + 130.5 + 59.4 + 145.2] = 576 CF

IX. STORM WATER CONTROL MEASURES

TO MANAGE THE FIRST ½" OF RUN-OFF IN ORDER TO PREVENT A CONCENTRATION OF POLLUTANTS FROM RUNNING OFF-SITE A RETENTION CHANNEL IS PROPOSED ON-SITE. THE VOLUME OF SAID RETENTION CHANNEL IS AS FOLLOWS:

2nd

FIRST ½" VOL. = SITE AREA X 0.5 INCHES = 425 CF

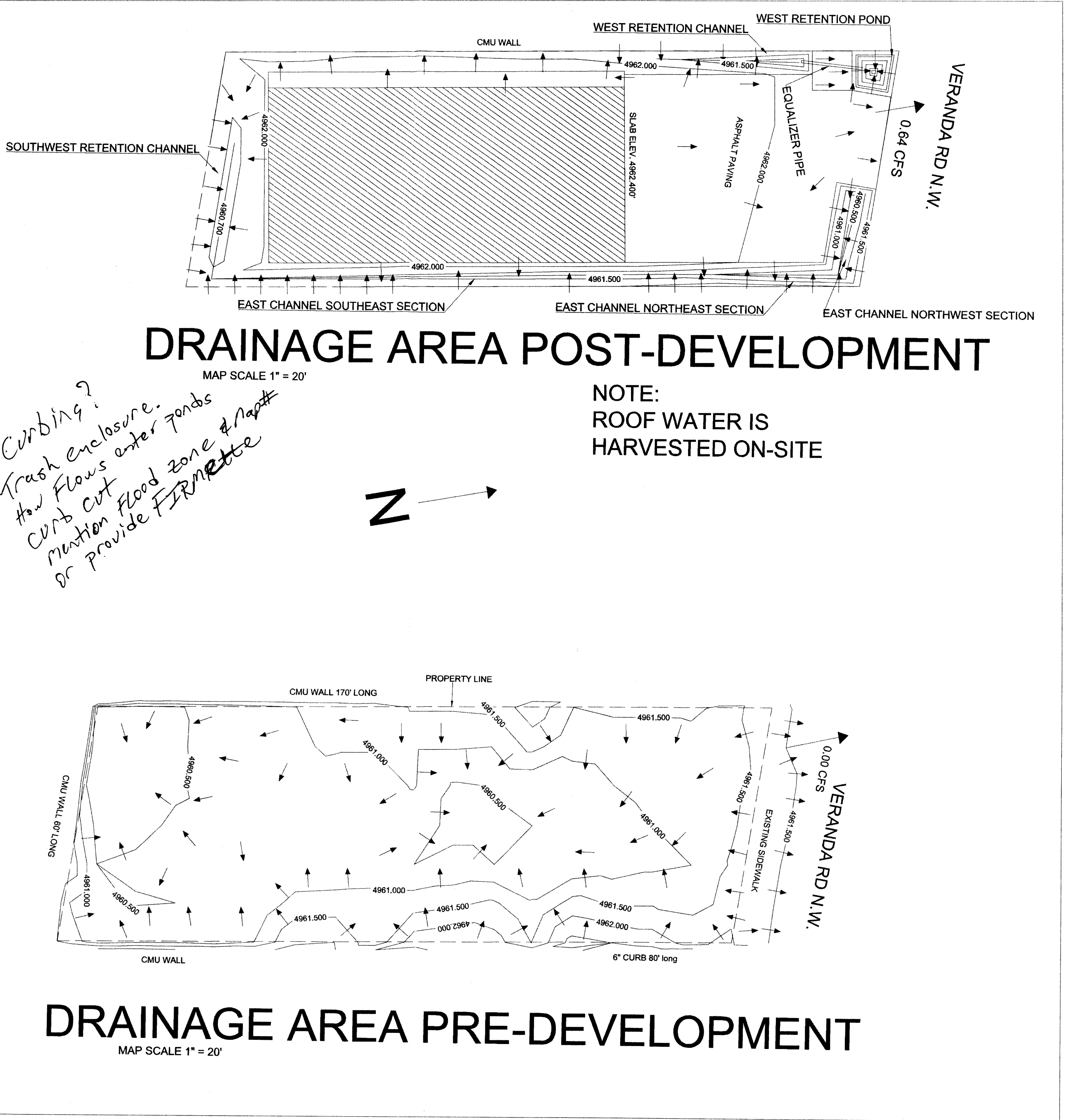
RETENTION = 576 CF

425 CF (FIRST ½") - 576 CF (RETENTION) ≤ 0 (FIRST ½" MET)

THE DUMPSTER PAD WILL DRAIN INTO THE WEST POND AREA.

X. CONCLUSION

THIS PLAN SUPPORTS THE PROPOSED DEVELOPMENT. THE PROPOSED STORM DRAINAGE FACILITIES WILL ADEQUATELY RETAIN AND CONVEY STORMWATER GENERATED ON-SITE BY A 100 YEAR, 24-HOUR STORM EVENT. ALSO, IF CONSTRUCTED IN ACCORDANCE WITH THE ASSOCIATED GRADING AND DRAINAGE PLAN, THE SITE HYDRAULICS WILL RETAIN 576.71 CF OF STORMWATER RUN OFF ON-SITE. THIS IS MORE THAN THE REQUIRED RETENTION OF THE FIRST 0.5 INCH OF RAINFALL TO BE CAPTURED IN THE VALLEY AND FLOWS ARE AT 0.635 CFS LESS THAN THE 2.75 CFS/ACRE.



LOGAN PATZ
NEW MEXICO
19014
PROFESSIONAL ENGINEER
8/16/16

PATZ - WHAREHOUSE/APPARTMENT
406 VERANDA RD N.W.
DATE: 08-08-2016
PROJECT #:

GRADING & DRAINAGE GENERAL NOTES

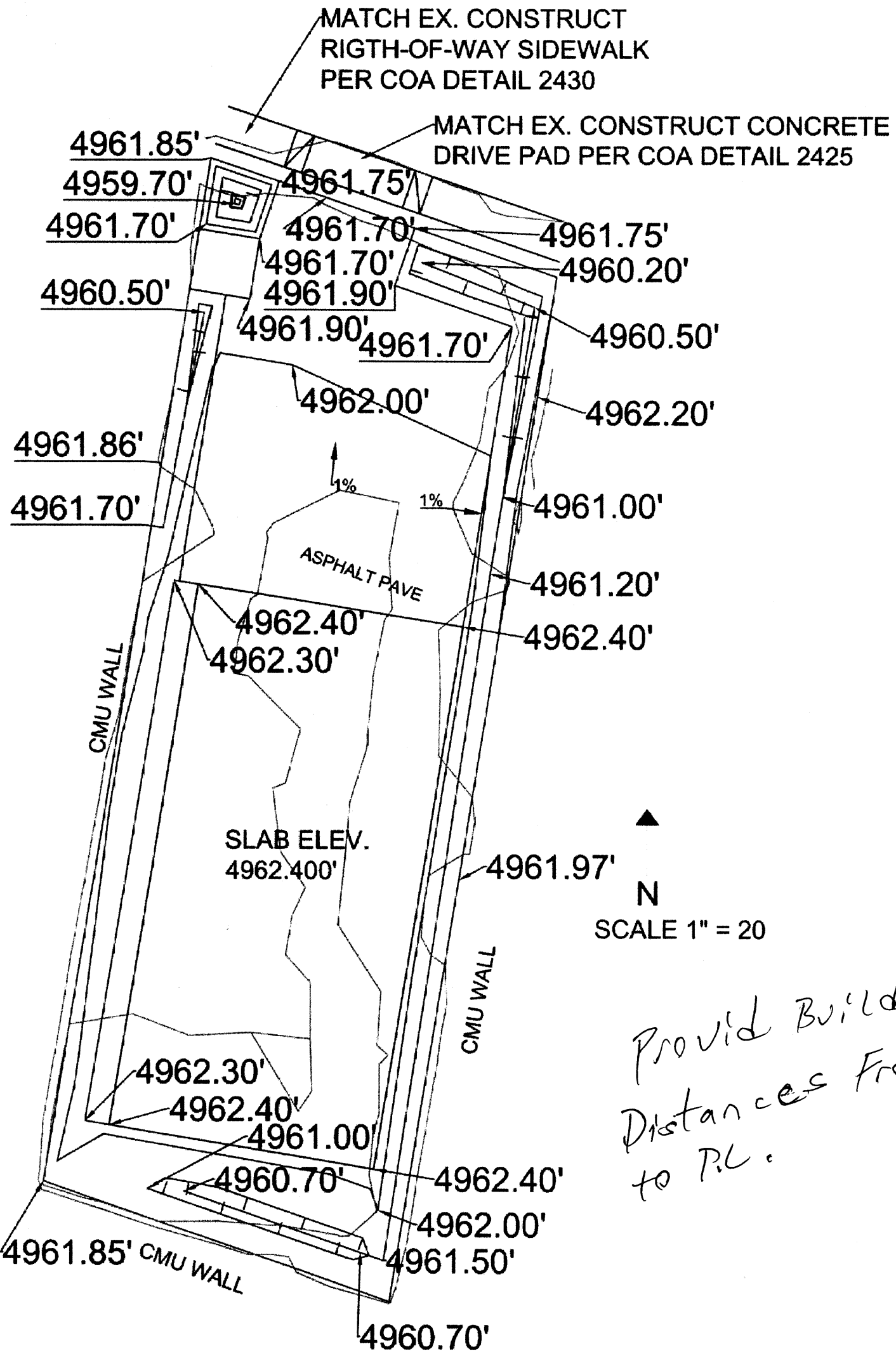
1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT. EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALE BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AND THE CITY OF ALBUQUERQUE SPECIFICATIONS
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (250-1990), FOR LOCATION OF EXISTING UTILITIES CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES AND OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR WILL NOTIFY THE OWNER IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THIS WORK IS CONSIDERED INCIDENTAL TO THE PROJECT AND NO DIRECT PAYMENT WILL BE MADE THEREFOR.
4. ALL EXCAVATION SHALL BE GOVERNED BY FEDERAL, STATE, AND LOCAL LAW, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH, OSHA 29 CFR 1926.650. ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KNOW AND COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970"
6. CONTRACTOR SHALL SCARIFY TO A DEPTH OF 8" AND RE-COMPACT SUBGRADE TO 95% MAX. DENSITY AS DETERMINED BY ASTM D-1557 UNLESS NOTED OTHERWISE IN GEOTECH REPORT.
7. CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING BORROW MATERIAL OR HAULING OFF EXCESS MATERIAL THE TRANSPORTATION AND/OR DISPOSAL OF THESE MATERIALS SHALL BE CONSIDERED REUSED MUST BE REMOVED FROM THE PROJECT AREA WITHIN FOUR (4) DAYS OF EXCAVATION.
8. NO SEPARATE PAYMENT WILL BE MADE FOR ANY HAULING OR DISPOSAL OF MATERIAL THE TRANSPORTATION AND/OR DISPOSAL OF MATERIAL SHALL BE CONSIDERED INCIDENTAL TO PROJECT.
9. WHEN ABUTTING NEW CONCRETE TO EXISTING, CUT BACK EXISTING TO A NEAT STRAIGHT LINE AS REQUIRED TO REMOVE ANY BROKEN OR CRACKED CONCRETE, AND MATCH NEW TO EXISTING. NO SEPARATE PAYMENT SHALL BE MADE FOR SAW CUTTING OF EXISTING PAVEMENT OR CONCRETE BUT SHALL BE CONSIDERED INCIDENTAL TO PROJECT. CUTTING OF PAVEMENT OR CONCRETE SHALL BE IN CONFORMANCE WITH PROJECT SPECIFICATIONS.
10. EXERCISE CARE TO AVOID DISTURBING EXISTING, UTILITIES. COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED RELOCATIONS, AND IN ORDER TO PREVENT ANY SERVICE DISRUPTIONS.
11. CONTRACTOR SHALL PROVIDE REASONABLE ACCESS TO TEMPORARY FACILITIES WITHIN THE PROJECT AREA DURING CONSTRUCTION.
12. WATERING FOR DUST CONTROL, AS REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR. CONSTRUCTION AREAS SHALL BE WATERED OR OTHERWISE KEPT DUST FREE. THE CONTRACTOR SHALL USE WATERING EQUIPMENT FOR DUST POLLUTION ABATEMENT AS DIRECTED BY THE OWNER.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL DEMOLITION DEBRIS, WORK MATERIAL SHALL BE DISPOSED OF IN A CITY APPROVED WASTE AREA, IN ACCORDANCE WITH ALBUQUERQUE SPECIFICATIONS, SECURED BY AND AT THE EXPENSE OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED UTILITY LINES THAT ARE EXPOSED AS A RESULT OF CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE ARCHITECT.
15. THE CONTRACTOR AGREES TO TAKE NECESSARY SAFETY PRECAUTIONS AS REQUIRED BY FEDERAL STATE AND LOCAL AUTHORITIES TO PROTECT PEDESTRIANS AND VEHICULAR TRAFFIC IN THE CONSTRUCTION AREA, WHICH INCLUDES BUT ARE NOT LIMITED TO: MAINTAINING ADEQUATE WARNING SIGNS, BARRICADES, LIGHTS, GUARD FENCES, WALK AND BRIDGES.
16. CONTRACTOR SHALL ADJUST CLEANOUT RIMS, VALVE CANS, GRATES AND MH COVER LIDS AS NEEDED TO MATCH FINISHED ELEVATIONS.
17. CONTRACTOR'S YARD AND ANY OTHER AREAS DISTURBED BY THE CONTRACTOR NOT INCLUDED ON THE PLANS, SHALL BE RE-ESTABLISHED TO OWNERS SATISFACTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO PROJECT AND NO MEASUREMENT OR PAYMENT WILL BE MADE THEREFOR.
18. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND ADHERING TO A STORMWATER POLLUTION PREVENTION PLAN AS REQUIRED.
19. SAFETY RAILS ARE REQUIRED AT ALL LOCATIONS ADJACENT TO A PEDESTRIAN WALKWAY WHERE A VERTICAL DROP OF 24" OR MORE EXISTS, OR AS APPLICABLE PER GOVERNING BUILDING CODE.
20. COORDINATE IMPROVEMENTS SHOWN ON THIS PLAN WITH THE ARCHITECT'S SITE PLAN COORDINATE ANY DEPENDENCIES WITH THE OWNER
21. SITE SURVEY IS COORDINATED WITH THE PLOT SURVEY AND TIED TO THE 3/4" ROD FOUND AT THE EDGE OF THE PROPERTY LINE 90' FROM THE NORTHEAST CORNER.
22. GRADES SHOWN ARE FINISHED ELEVATIONS.

FACILITIES WITHIN THE ROW NOTICE TO CONTRACTOR (SO-19)

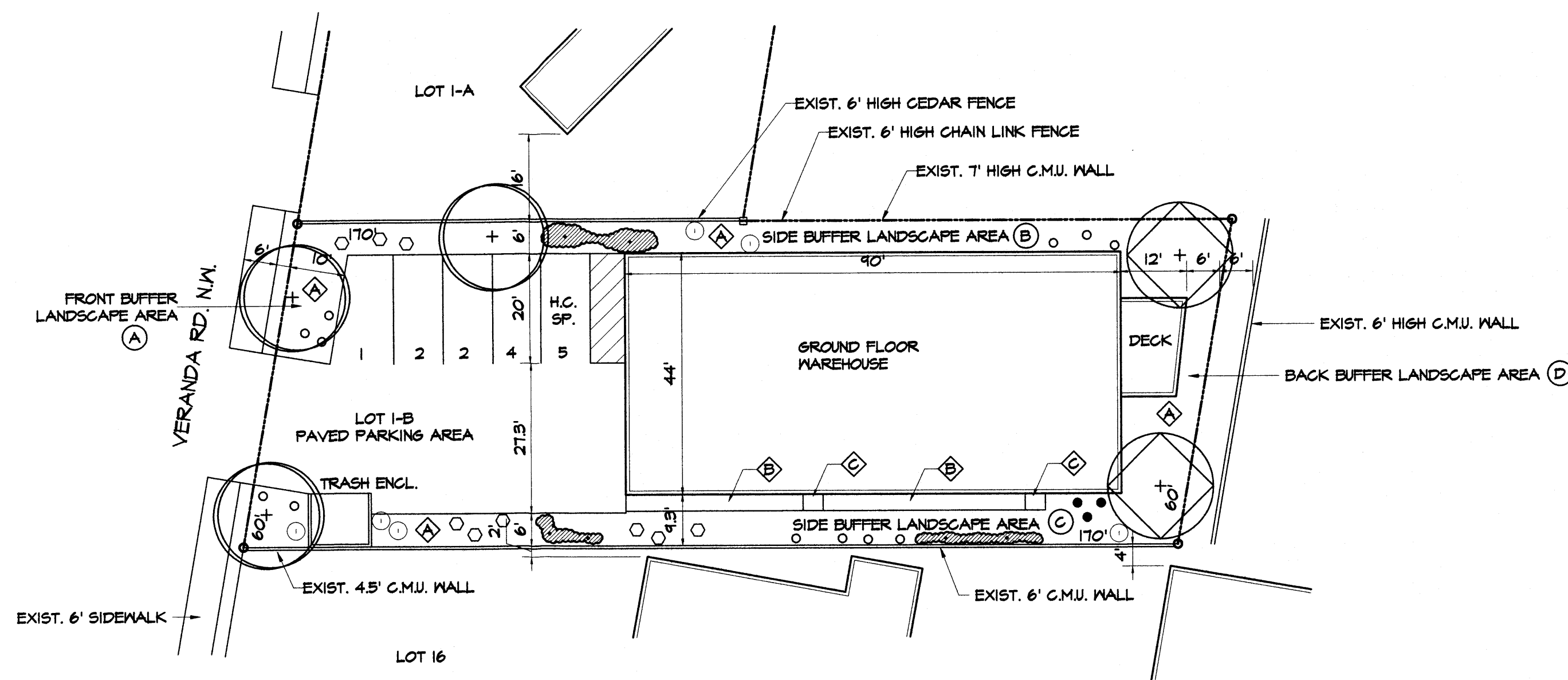
1. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE RIGHT -OF-WAY.
2. ALL WORK IN THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT THE LINE LOCATION SERVICES, NEW MEXICO ONE CALL 260-1990 (NM ONE CALL "811") FOR THE LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL EXISTING OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER/OWNER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO STREET USE.
6. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

SIGNATURE

DATE



PATZ - WHAREHOUSE/APPARTMENT
406 VERANDA RD N.W.
DATE: 08-08-2016
PROJECT #:



LANDSCAPE PLAN
1" = 20'-0"

LANDSCAPE LEGEND

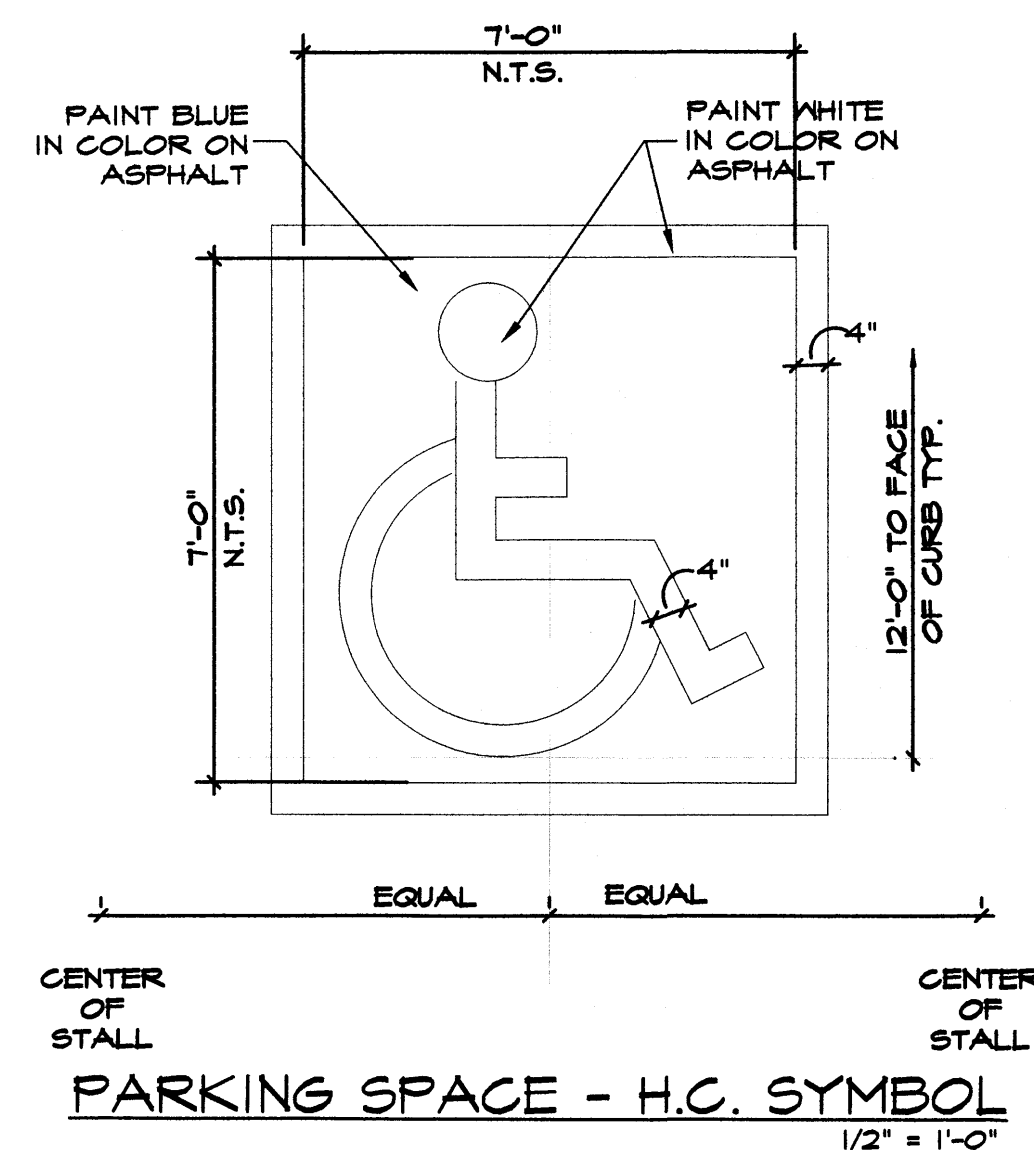
QTY.	SIZE	COMMON/BOTANICAL	H x W	AREA	TOTAL	WATER USE
TREES						
2	2" CAL.	CHINESE PISTACHE PISTACIA CHINENSIS	40 x 30	1200	1,400	MEDIUM
3	2" CAL.	HONEY LOCUST GLIEDITSIA TRIACANTHOS	50 x 40	1,200	3,700	MEDIUM
SHRUBS						
9	1 GAL.	CHERRY SAGE SALVIA GREGGII	2 x 3	7	63	MEDIUM
7	1 GAL.	HEAVENLY BAMBOO NANDINA DOMESTICA	6 x 6	28	146	MEDIUM
6	1 GAL.	BUFFALO JUNIPER JUNIPERUS SABINA	1 x 12	144	864	LOW +
GROUND COVER						
12	1 GAL.	BUFFALO GRASS BUCHLOD DACTYLOIDES	1' x 2'	3	36	MEDIUM
3	1 GAL.	BLUE FESCUE FESTUCA OVINA GLAUCA	1' x 2'	3	9	MEDIUM
HARDSCAPE						
LANDSCAPE GRAVEL OVER FILTER FABRIC - ALL PLANTING AREAS						
CRUSHER FINES WITH STEEL EDGING - WALKING PATH ALONG WEST SIDE OF BUILDING.						
5' x 5' CONCRETE STOOP AT EXTERIOR DOORS						

LANDSCAPE CALCULATIONS

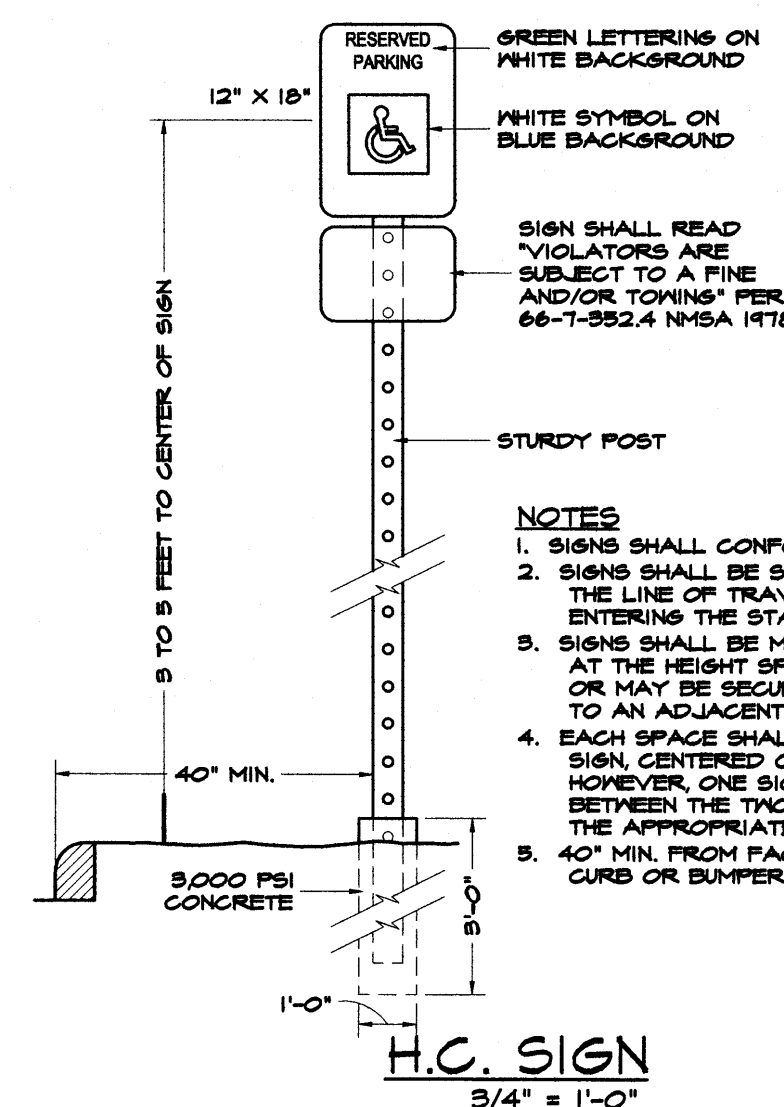
TOTAL LOT AREA	10,081 SQ. FT.
NET LOT AREA	6,121 SQ. FT.
MINIMUM LANDSCAPED AREA REQUIRED	420 SQ. FT.
LANDSCAPE AREA PROVIDED	
FRONT LANDSCAPE AREA 'A'	600 SQ. FT.
SIDE LANDSCAPE AREA 'B'	840 SQ. FT.
SIDE LANDSCAPE AREA 'C'	1,100 SQ. FT.
BACK LANDSCAPE AREA 'D'	890 SQ. FT.
TOTAL LANDSCAPE AREA PROVIDED	3,430 SQ. FT.

LANDSCAPE & IRRIGATION NOTES

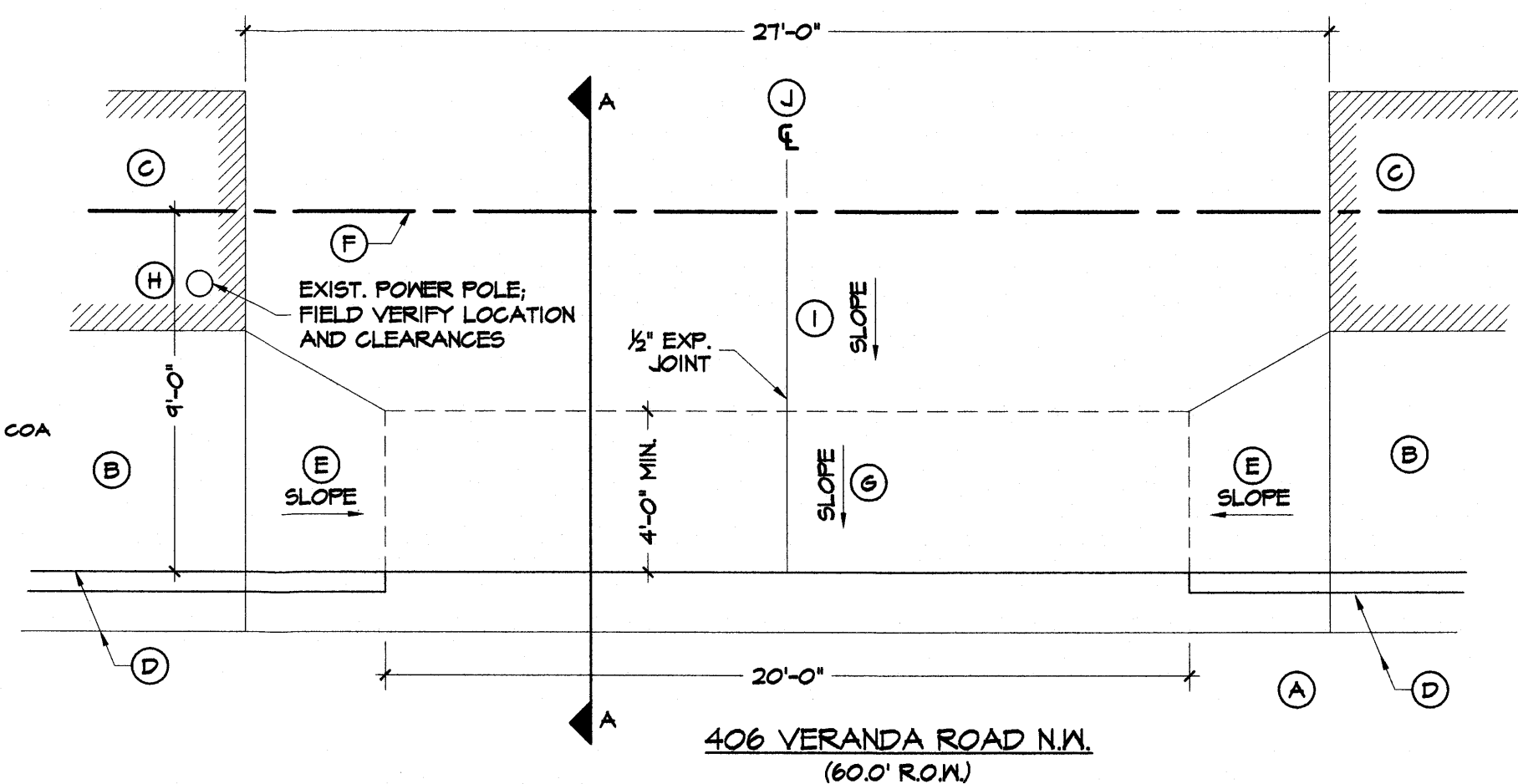
- LANDSCAPE AND IRRIGATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
- IRRIGATION SYSTEM WILL BE COMPLETELY UNDERGROUND. TREES TO RECEIVE TREE RINGS, SHRUBS TO RECEIVE (2) 10 GPH DRIP EMITTERS, GROUND COVER TO RECEIVE (1) 10 GPH EMITTER.
- IRRIGATION WILL BE OPERATED BY AUTOMATIC CONTROLLER. LOCATION OF CONTROLLER TO BE FIELD DETERMINED.



PARKING SPACE - H.C. SYMBOL
1/2" = 1'-0"

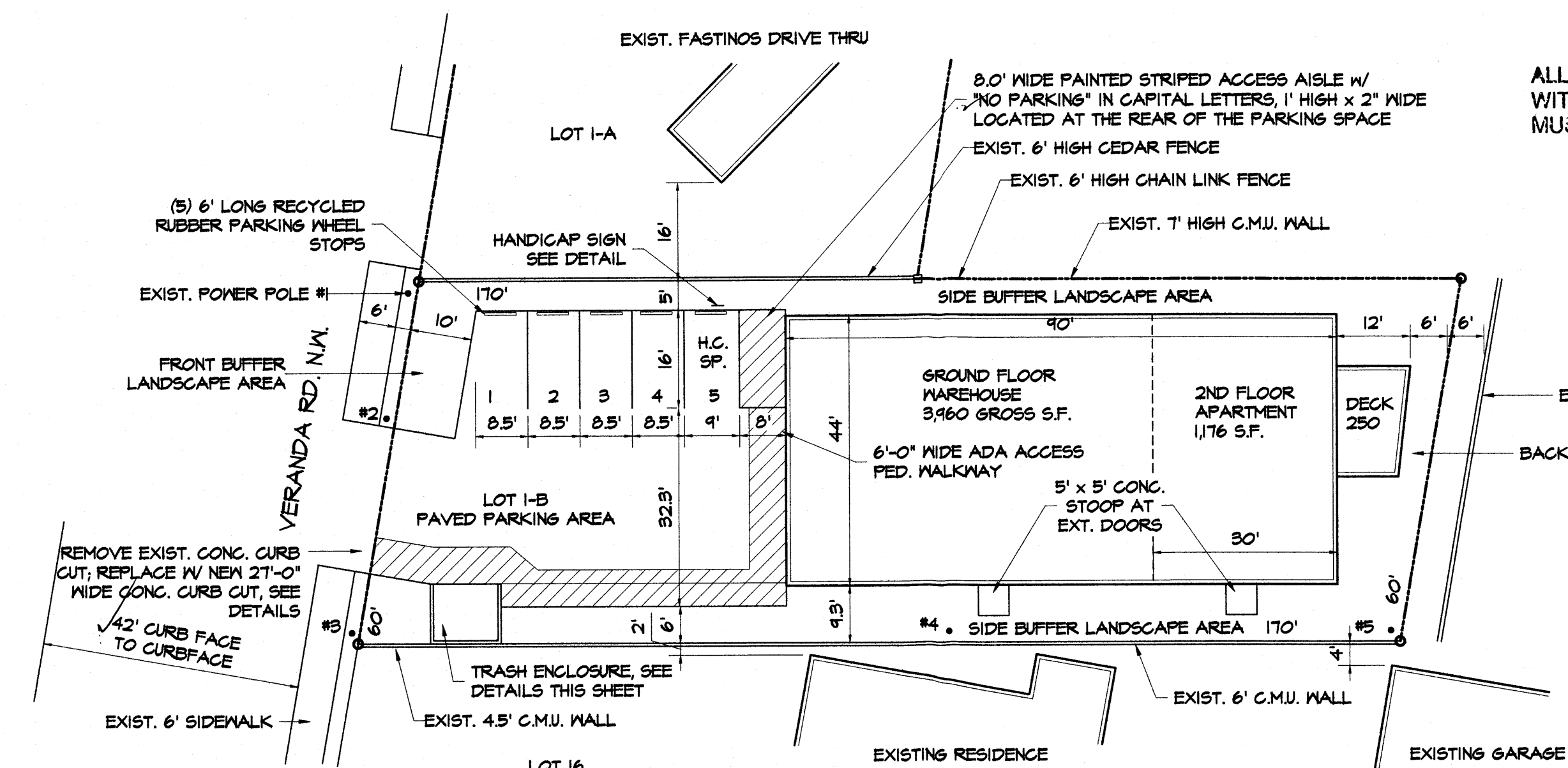


H.C. SIGN
3/4" = 1'-0"



NEW DRIVEPAD W/ SIDEWALK AT BACK OF CURB
1/4" = 1'-0"

NOTE: REFER TO STD. DWS. 2425 FOR DRIVE, 2430 FOR SIDEWALK AND 2415A FOR CURB AND SUTTER

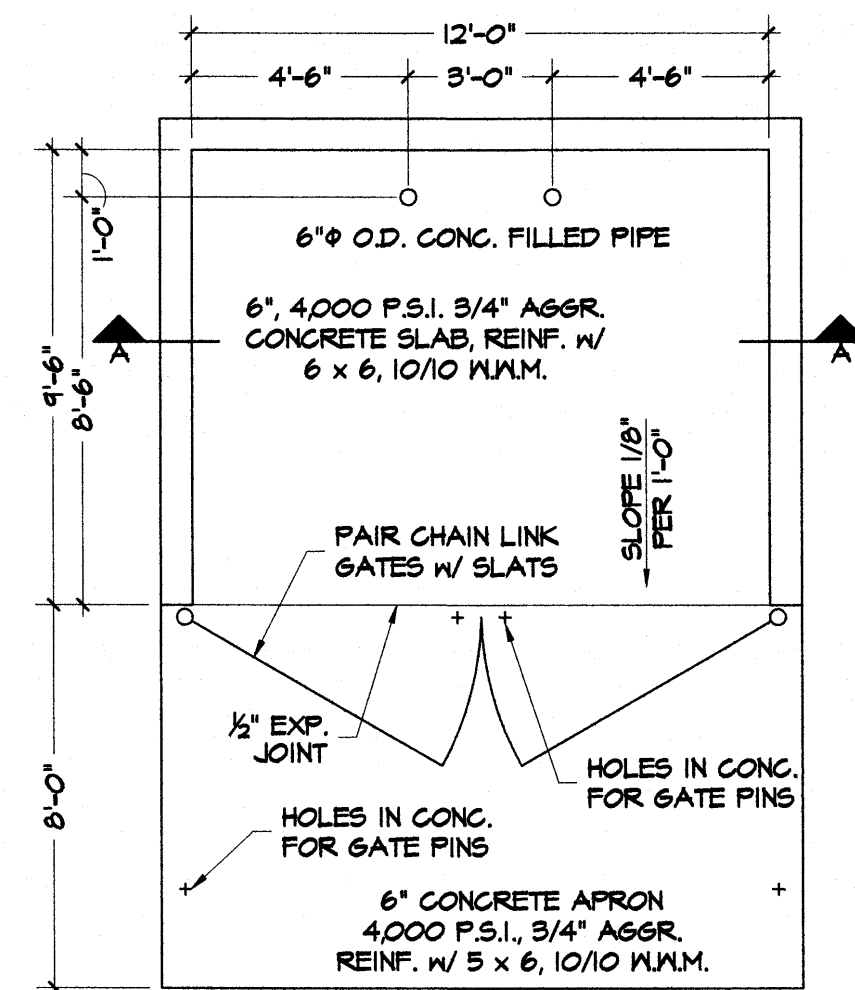


SITE PLAN
1" = 20'-0"

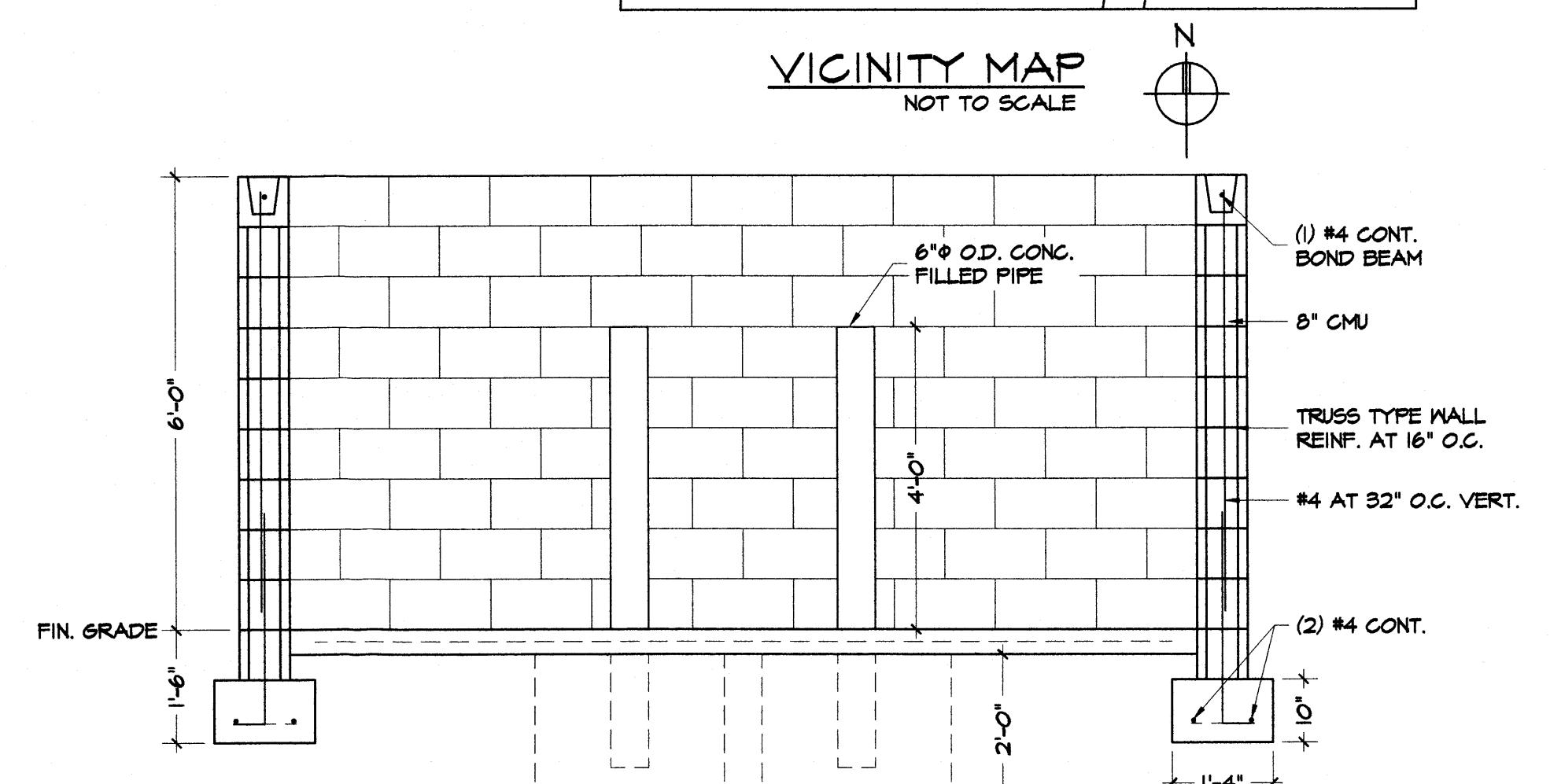
LEGAL DESCRIPTION
LOT 1-B, BLOCK 17, MONKBRIDGE ADDITION
PROJECTED SECTION 5, TOWNSHIP 10N,
RANGE 3E, NMPM TOWN OF ALBUQUERQUE
GRANT, BERNALILLO COUNTY, NEW MEXICO
PROJECT ADDRESS
406 VERANDA RD. N.W., ALBUQUERQUE, NM
PROJECT DESCRIPTION
GROUND FLOOR WAREHOUSE WITH
SECOND FLR. OWNER APARTMENT
SITE ZONING
C-3
ZONE MAP
6-14-Z

PARKING BREAKDOWN

OFFICE	150 / 200	1 SPACE REQUIRED
WAREHOUSE	3,810 / 2,000	2 SPACES REQUIRED
APARTMENT		2 SPACES REQUIRED
TOTAL PARKING SPACES REQUIRED		5
PARKING SPACES SUPPLIED ON SITE		5
PARKING SPACES IN WAREHOUSE		2
TOTAL PARKING SPACES SUPPLIED		7

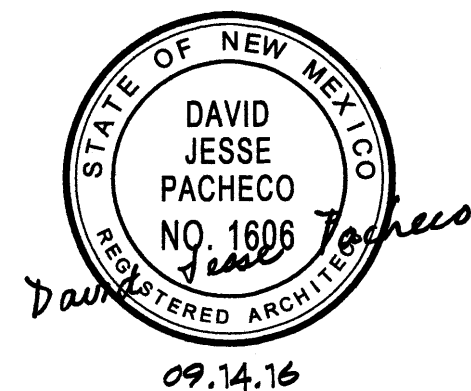


DUMPSTER ENCLOSURE
1/4" = 1'-0"

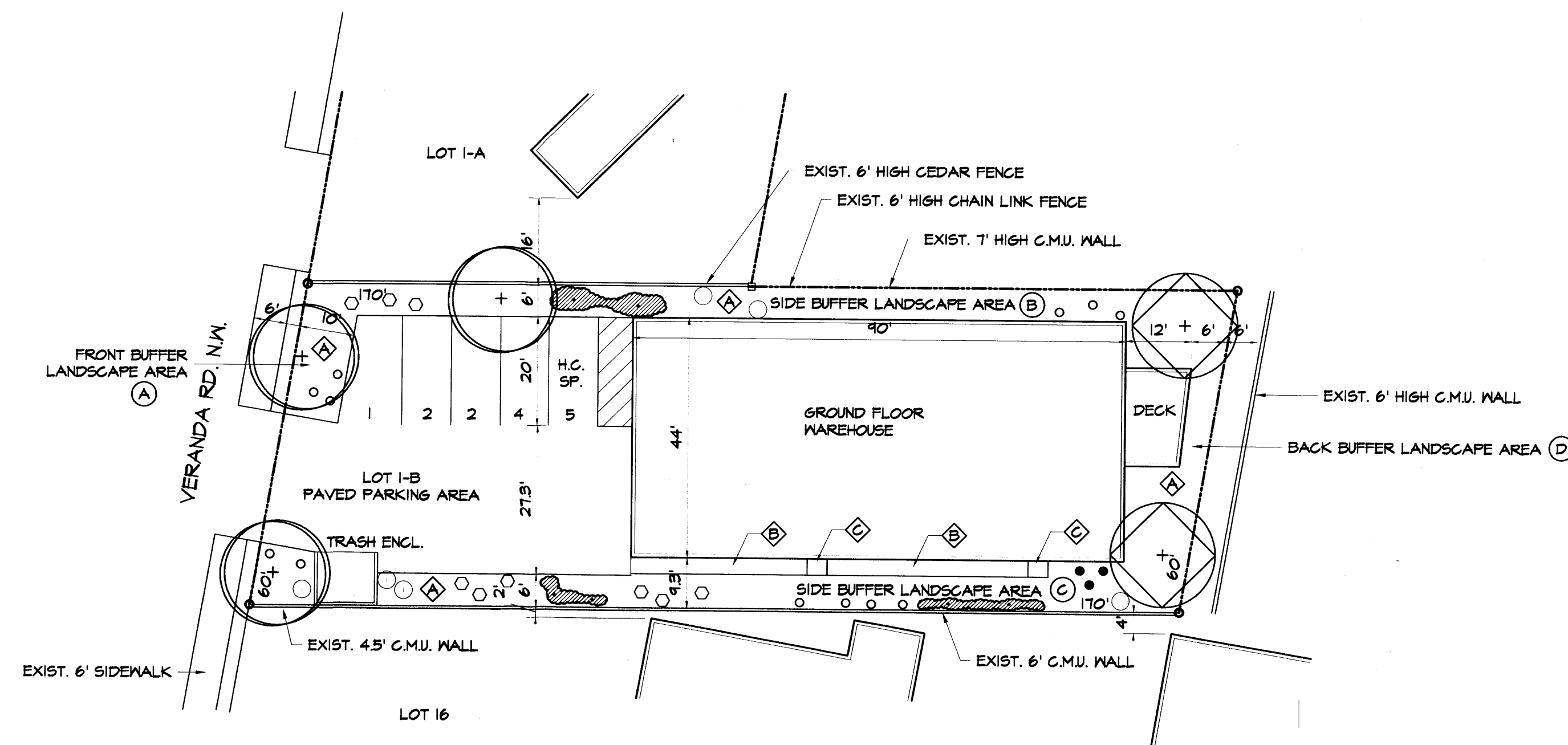


DUMPSTER ENCLOSURE SECTION - A-A
1/4" = 1'-0"

- KEYED NOTES**
- REMOVE EXIST. CURB CUT.
 - EXISTING 6'-0" WIDE CONCRETE SIDEWALK.
 - NEW LANDSCAPE AREA.
 - CURB AND SUTTER.
 - SLOPE TO BE ADJUSTED TO PROVIDE A UNIFORM TRANSITION BETWEEN SIDEWALK AND DRIVE PAD (NOT TO EXCEED 0.3%).
 - PROPERTY LINE / RIGHT OF WAY LINE.
 - MAXIMUM SLOPE 2%.
 - FINISH GRADE ELEVATION DIFFERENCE BETWEEN TOP OF DRIVE PAD AT PROPERTY LINE AND TOP OF CURB SHALL NOT EXCEED 2% SLOPE.
 - SLOPE REQUIRED TO MEET BOUNDARY ELEVATIONS AT PROPERTY LINE.
 - ASPHALT PAVING.
 - 1/2" EXPANSION JOINT ADJACENT TO EXISTING CONCRETE OR AS SHOWN FOR NEW CONSTRUCTION.



PATZ - WAREHOUSE/APARTMENT 406 VERANDA RD. N.W.		
DRAWN BY: D.J.P. & D.S.G.	DATE: 09.14.16	SHEET #: 1 of 11



LANDSCAPE PLAN
1" = 20'-0"

LANDSCAPE LEGEND

QTY.	SIZE	COMMON/BOTANICAL	H x W	AREA	TOTAL	WATER USE
TREES						
2	2" CAL.	CHINESE PISTACHE PISTACIA CHINENSIS	40 x 30	100	1,400	MEDIUM
3	2" CAL.	HONEY LOCUST GLADISTIA TRIACANTHOS	50 x 40	1,200	3,100	MEDIUM
SHRUBS						
9	1 GAL.	CHERRY SAGE SALVIA GRESEII	2 x 3	7	63	MEDIUM
7	1 GAL.	HEAVENLY BAMBOO NANDINA DOMESTICA	6 x 6	28	196	MEDIUM
6	1 GAL.	BUFFALO JUNIFER JUNIPERUS SABINA	1 x 12	144	864	LOW +
GROUND COVER						
12	1 GAL.	BUFFALO GRASS BUCHLOE DACTYLOIDES	1' x 2'	3	36	MEDIUM
3	1 GAL.	BLUE FESCUE FESTUCA OVINA GLAUCA	1' x 2'	3	9	MEDIUM

HARDSCAPE

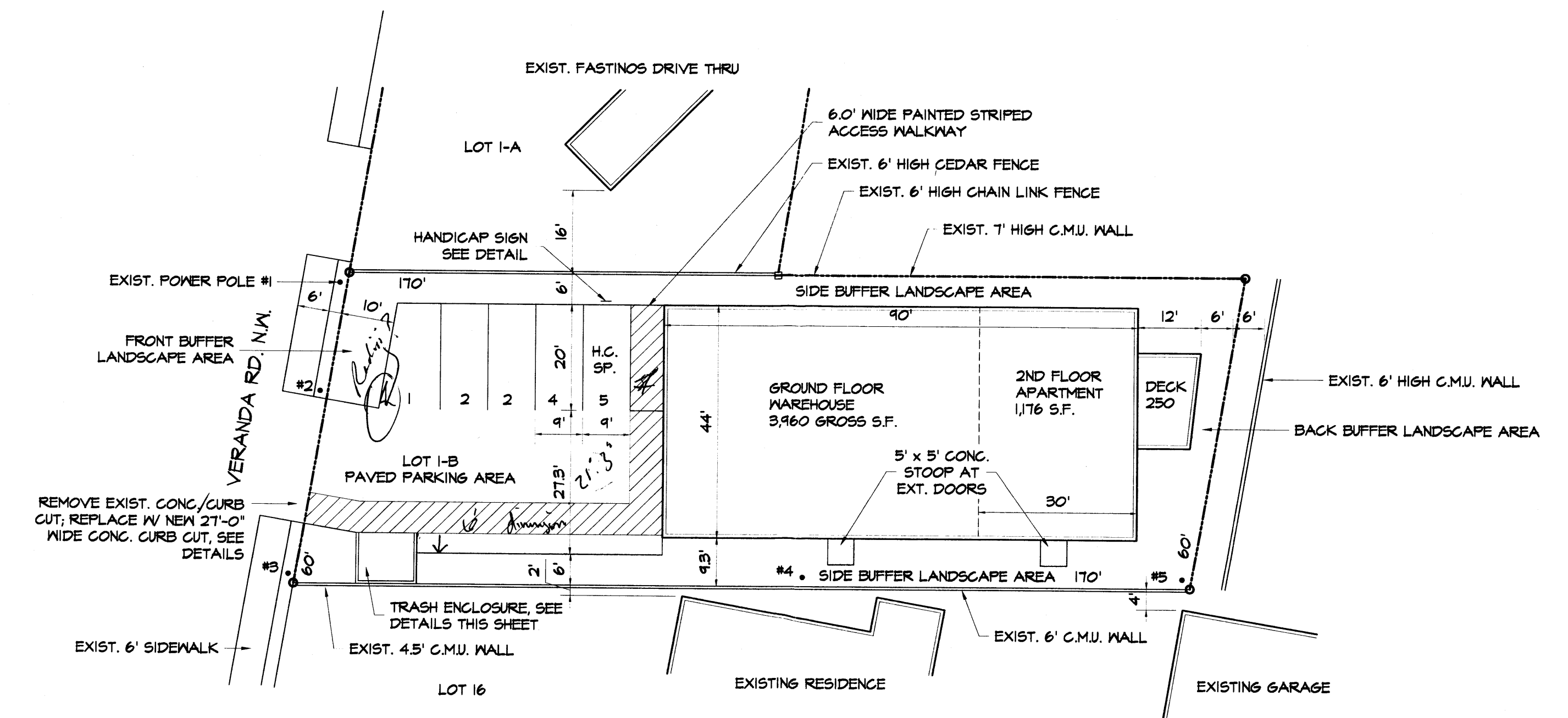
- LANDSCAPE GRAVEL OVER FILTER FABRIC - ALL PLANTING AREAS
- CRUSHER FINES WITH STEEL EDGINGS - WALKING PATH ALONG WEST SIDE OF BUILDINGS
- 5' x 5' CONCRETE STOOP AT EXTERIOR DOORS

LANDSCAPE CALCULATIONS

TOTAL LOT AREA	10,081 SQ. FT.
NET LOT AREA	6,121 SQ. FT.
MINIMUM LANDSCAPED AREA REQUIRED	920 SQ. FT.
LANDSCAPE AREA PROVIDED	
FRONT LANDSCAPE AREA 'A'	600 SQ. FT.
SIDE LANDSCAPE AREA 'B'	840 SQ. FT.
SIDE LANDSCAPE AREA 'C'	1,100 SQ. FT.
BACK LANDSCAPE AREA 'D'	840 SQ. FT.
TOTAL LANDSCAPE AREA PROVIDED	3,480 SQ. FT.

LANDSCAPE & IRRIGATION NOTES

- LANDSCAPE AND IRRIGATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER
- IRRIGATION SYSTEM WILL BE COMPLETELY UNDERGROUND. TREES TO RECEIVE TREE RINGS, SHRUBS TO RECEIVE (2) 10 GPH DRIP EMITTERS, GROUND COVER TO RECEIVE (1) 10 GPH EMITTER
- IRRIGATION WILL BE OPERATED BY AUTOMATIC CONTROLLER. LOCATION OF CONTROLLER TO BE FIELD DETERMINED.



SITE PLAN
1" = 20'-0"

LEGAL DESCRIPTION

LOT 1-B, BLOCK 11, MONKBRIDGE ADDITION
PROJECTED SECTION 5, TOWNSHIP 10N,
RANGE 3E, NMPM TOWN OF ALBUQUERQUE
GRANT, BERNALILLO COUNTY, NEW MEXICO
PROJECT ADDRESS
406 VERANDA RD. N.W., ALBUQUERQUE, NM

PROJECT DESCRIPTION

GROUND FLOOR WAREHOUSE WITH
SECOND FLR. OWNER APARTMENT

SITE ZONING

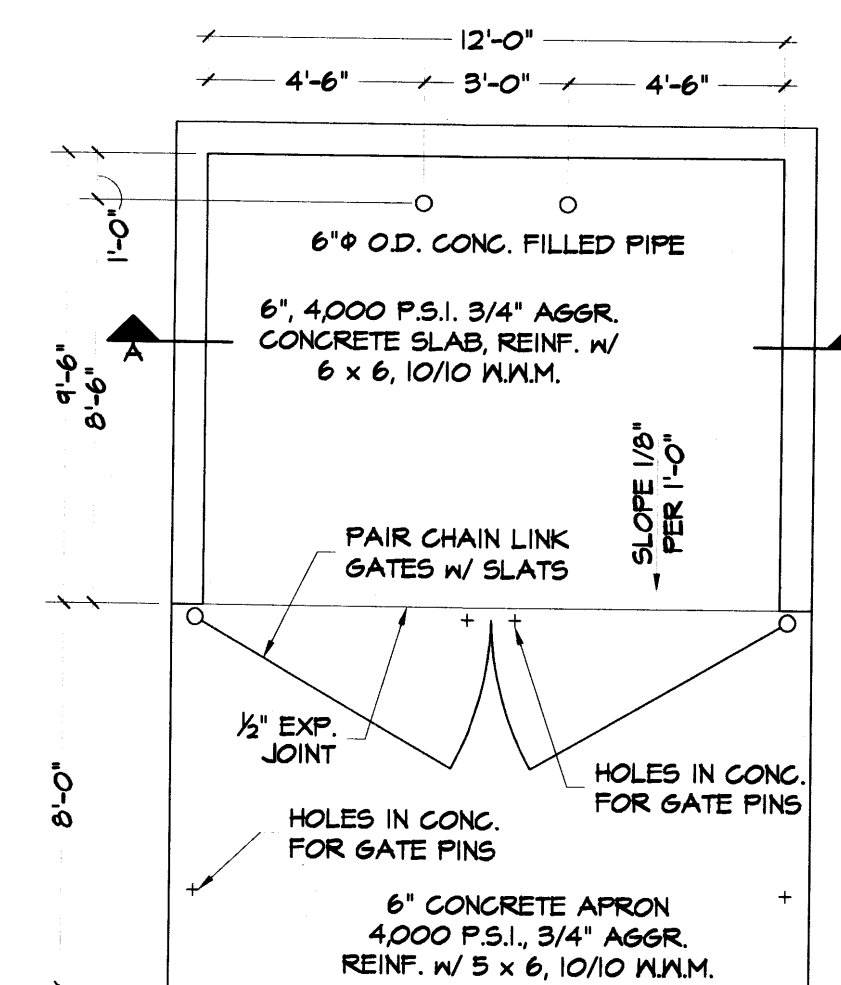
C-3

ZONE MAP

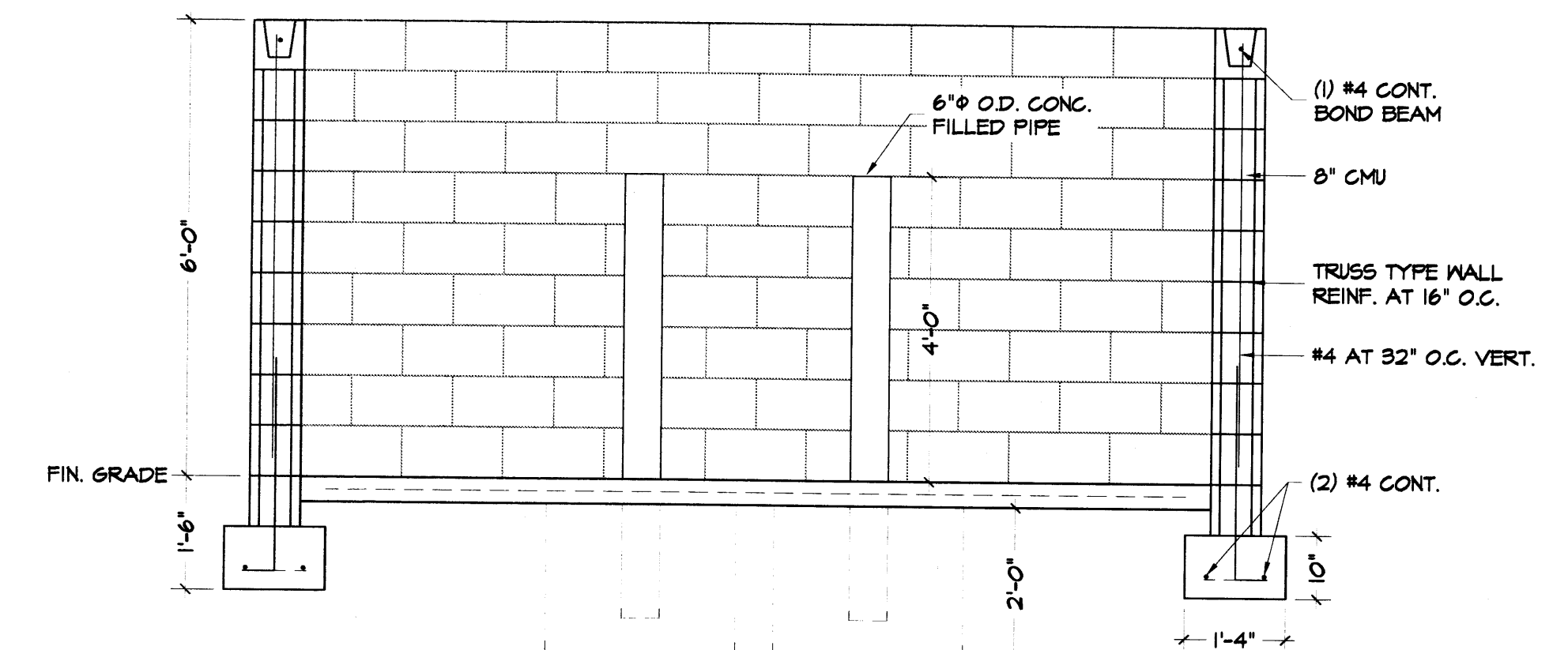
6-14-2

PARKING BREAKDOWN

OFFICE	= 150 / 200	= 1 SPACE REQUIRED
WAREHOUSE	= 3910 / 2000	= 2 SPACES REQUIRED
APARTMENT		2 SPACES REQUIRED
TOTAL PARKING SPACES REQUIRED		5
PARKING SPACES SUPPLIED ON SITE		5
PARKING SPACES IN WAREHOUSE		2
TOTAL PARKING SPACES SUPPLIED		7



DUMPSTER ENCLOSURE
1/4" = 1'-0"

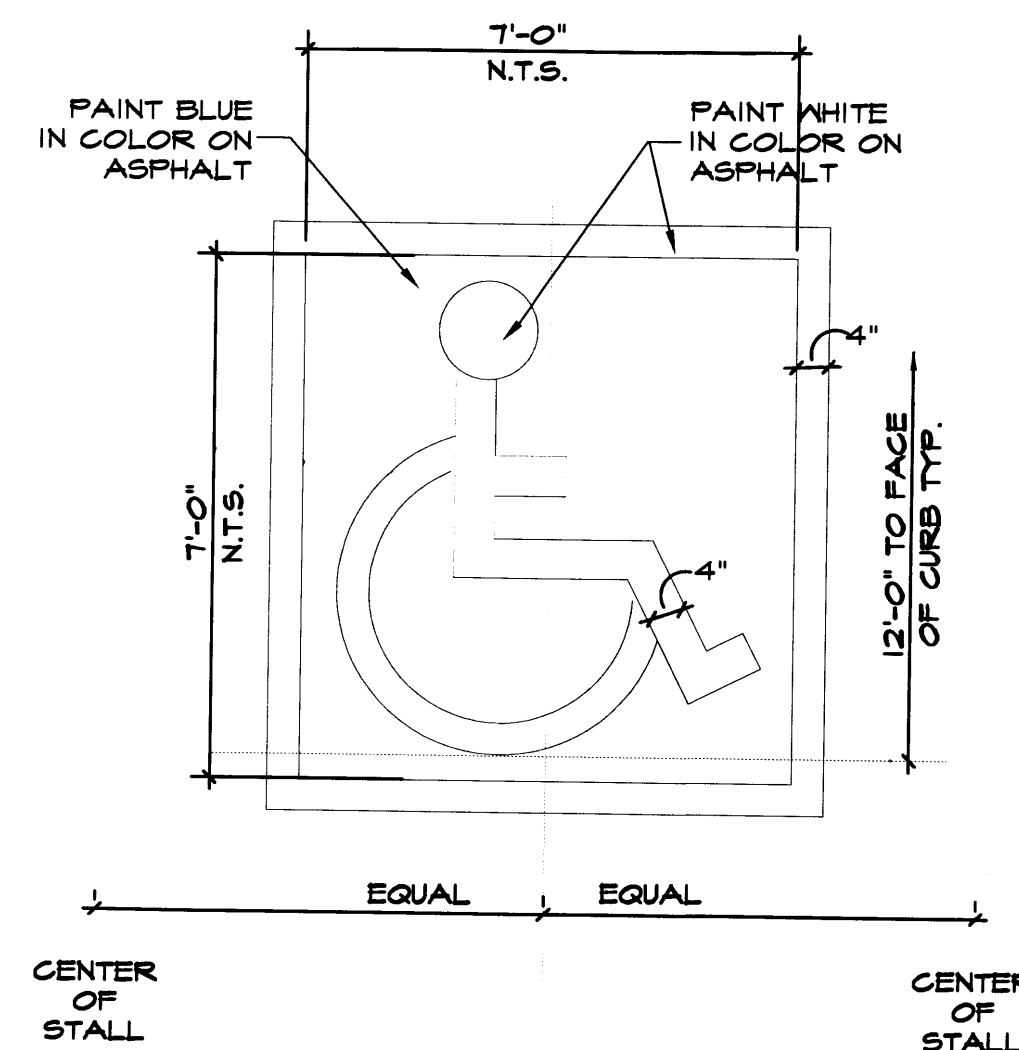


DUMPSTER ENCLOSURE SECTION - A A
1/4" = 1'-0"

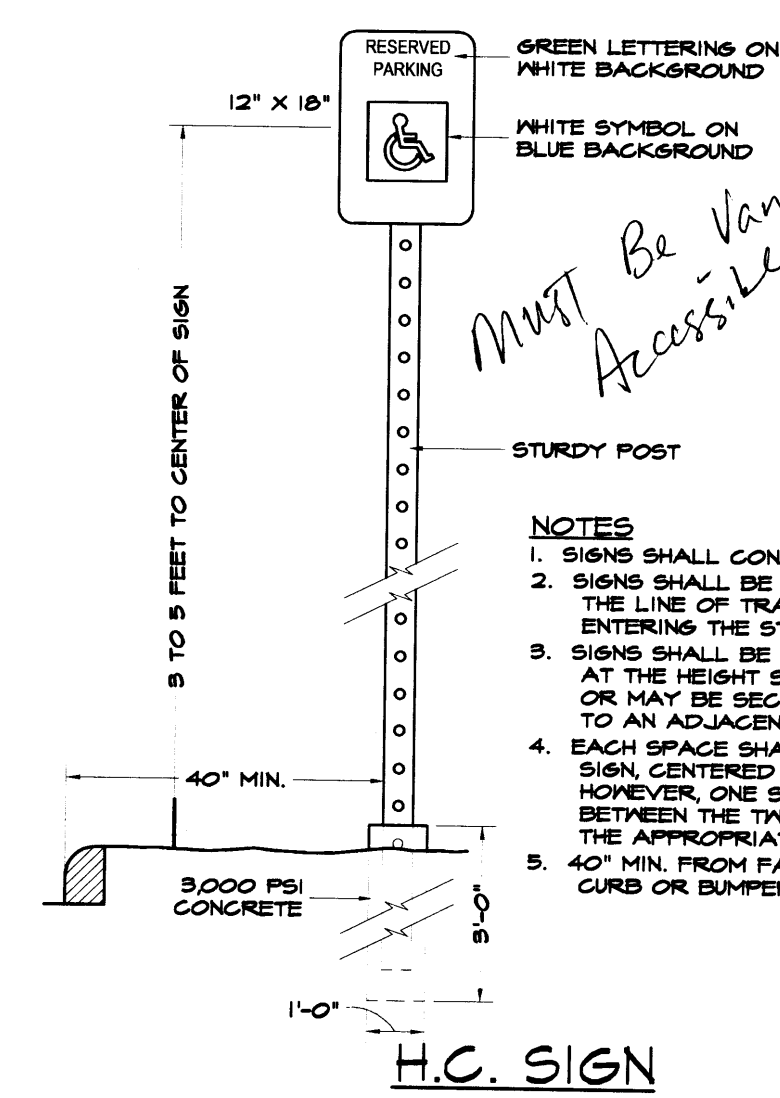
KEYED NOTES

- REMOVE EXIST. CURB CUT.
- EXISTING 6'-0" WIDE CONCRETE SIDEWALK.
- NEW LANDSCAPE AREA.
- CURB AND BUTTER.
- SLOPE TO BE ADJUSTED TO PROVIDE A UNIFORM TRANSITION BETWEEN SIDEWALK AND DRIVE PAD (NOT TO EXCEED 8.3%).
- PROPERTY LINE / RIGHT OF WAY LINE.
- MAXIMUM SLOPE 2%.
- FINISH GRADE ELEVATION DIFFERENCE BETWEEN TOP OF DRIVE PAD AT PROPERTY LINE AND TOP OF CURB SHALL NOT EXCEED 2% SLOPE.
- SLOPE REQUIRED TO MEET BOUNDARY ELEVATIONS AT PROPERTY LINE.
- ASPHALT PAVING.
- 5' EXPANSION JOINT ADJACENT TO EXISTING CONCRETE OR AS SHOWN FOR NEW CONSTRUCTION.

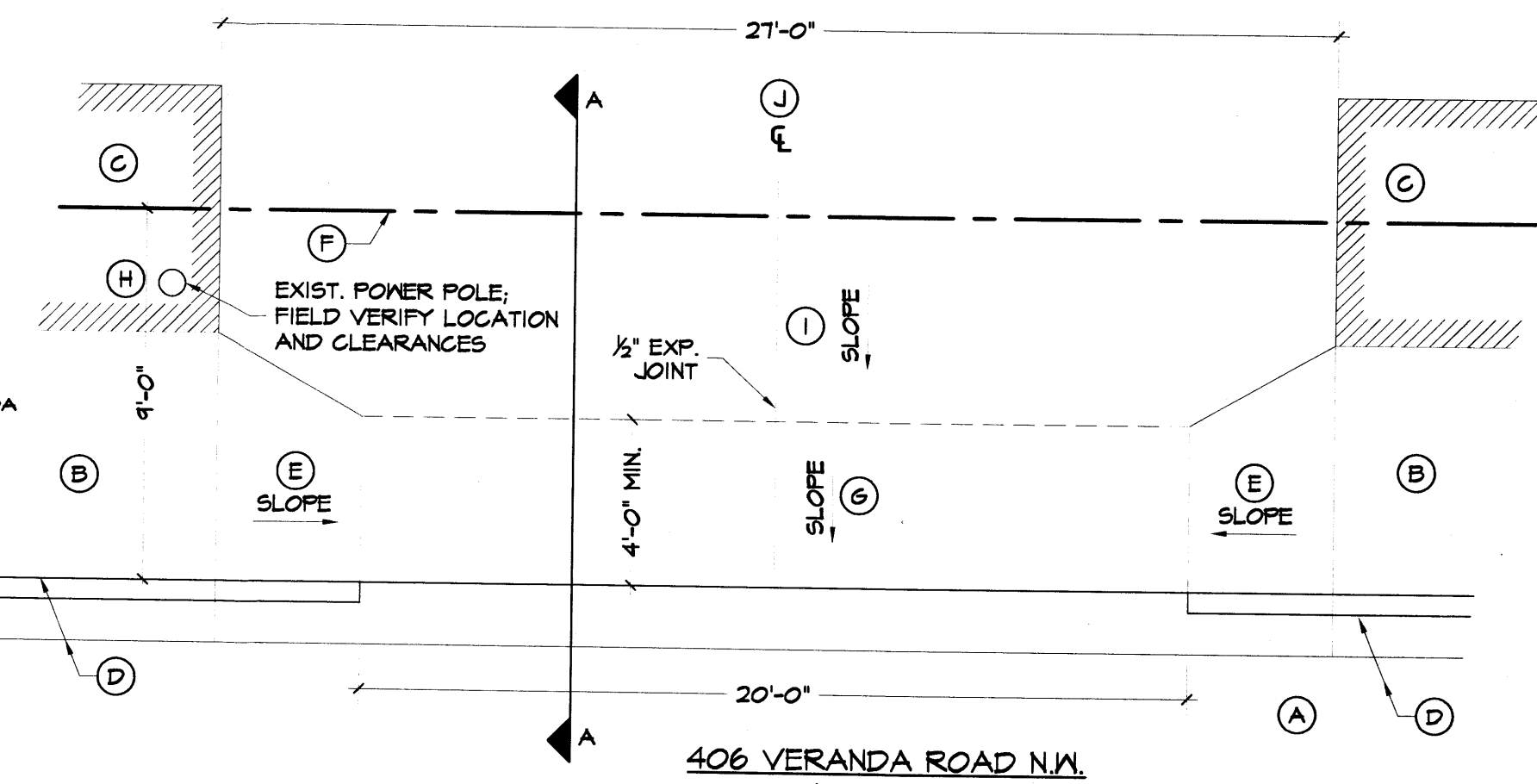
SECTION - A - A
N.T.S.



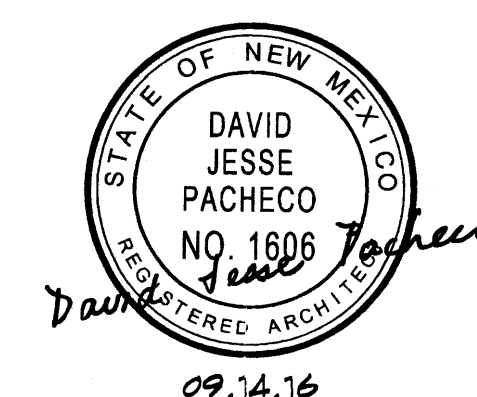
PARKING SPACE - H.C. SYMBOL
1/2" = 1'-0"



H.C. SIGN
3/4" = 1'-0"



NEW DRIVEPAD W/ SIDEWALK AT BACK OF CURB
1/4" = 1'-0"



PATZ - WAREHOUSE/APARTMENT 406 VERANDA RD. N.W.		
DRAWN BY: D.J.P. & D.S.G.	DATE: 09.14.16	SHEET #: 1 of 11