

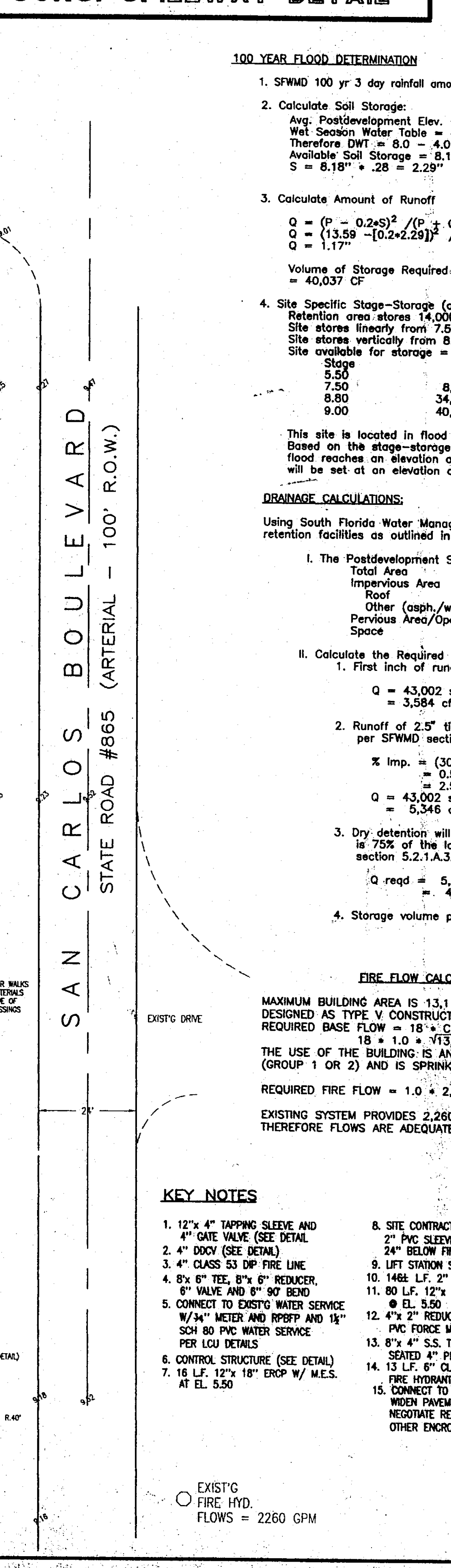
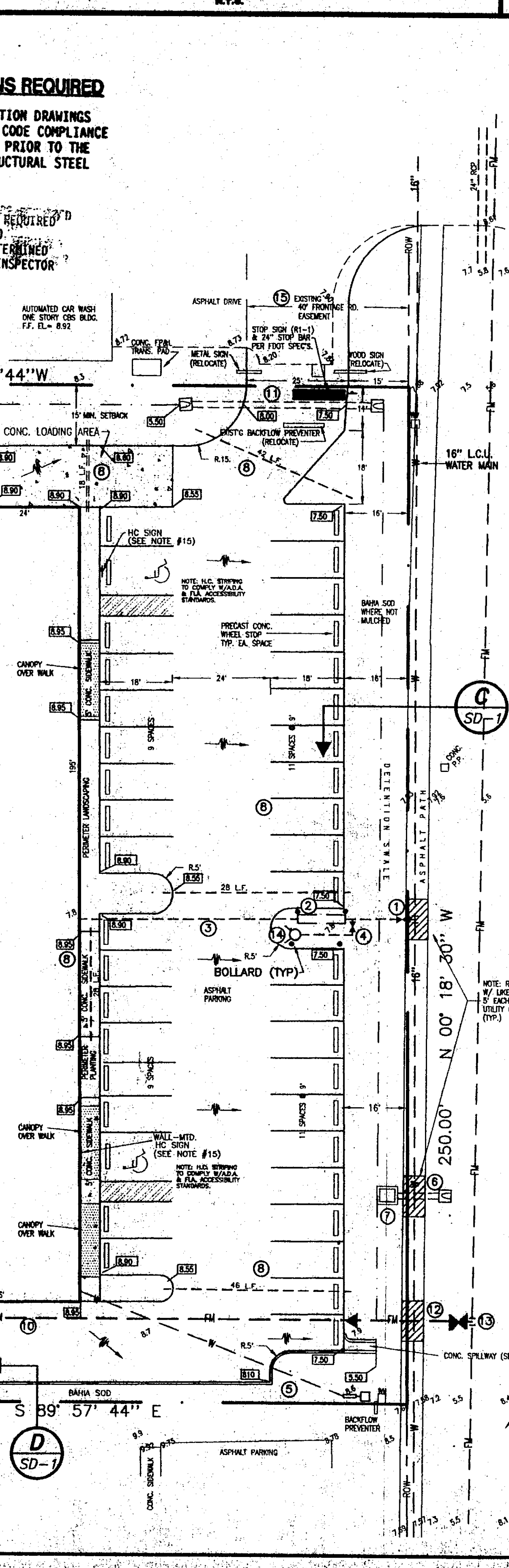
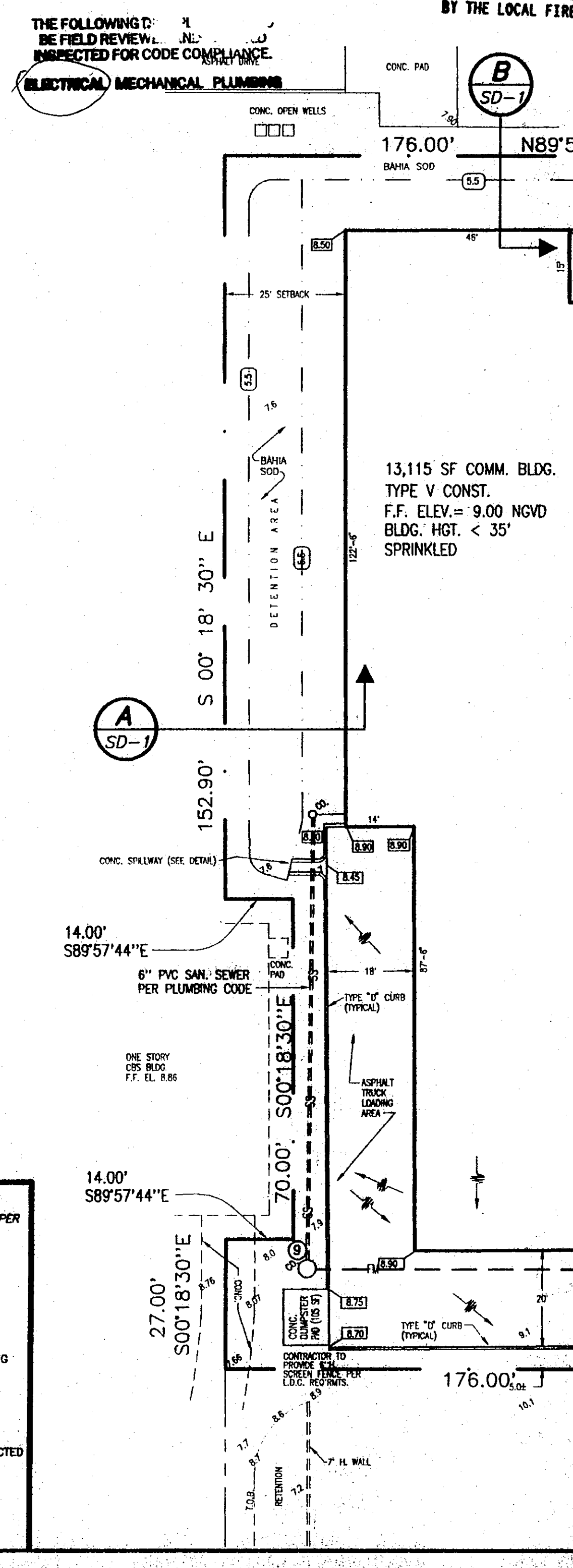
REVIEWED FOR CODE COMPLIANCE DEVELOPMENT SERVICES
 BY: [Signature] DATE: 2/2/00

ADDITIONAL PLANS REQUIRED
 METAL BUILDING ERECTION DRAWINGS MUST BE SUBMITTED FOR CODE COMPLIANCE REVIEW AND APPROVAL PRIOR TO THE ERECTION OF ANY STRUCTURAL STEEL

FIRE EXTINGUISHERS REQUIRED PER NFPA 10. PLACEMENT TO BE DETERMINED BY THE LOCAL FIRE INSPECTOR

FIRE DISTRICT INSPECTION REQUIRED Before A Certificate of Occupancy Can be Issued.

THE FOLLOWING MUST BE FIELD REVIEWED AND INSPECTED FOR CODE COMPLIANCE:
 1. ELECTRICAL
 2. MECHANICAL
 3. PLUMBING



100 YEAR FLOOD DETERMINATION

1. SFWMD 100 yr 3 day rainfall amount (P) = 10.0 + 1.359 = 13.59"
2. Calculate Soil Storage:
 Avg. Postdevelopment Elev. = 8.0 NGVD
 Wet Season Water Table = 4.0 NGVD+-
 Therefore DWT = 8.0 - 4.0 = 4.0
 Available Soil Storage = 8.18"
 $S = 8.18" \cdot .28 = 2.29"$
3. Calculate Amount of Runoff
 $Q = (P - 0.2S)^2 / (P + 0.8S)$
 $Q = (13.59 - [0.2 \cdot 2.29])^2 / (13.59 + [0.8 \cdot 2.29])$
 $Q = 1.17"$
 Volume of Storage Required = $11.17" \cdot 1' / 12" \cdot 43,002 \text{ SF} = 40,037 \text{ CF}$
4. Site Specific Stage-Storage (assumes zero discharge)
 Retention area stores 14,000 c.f. to EL. 9.0
 Site stores linearly from 7.50 to 8.90
 Site stores vertically from 8.80 to 9.00
 Storage available for storage = 30,000 SF

Storage	0 CF	8,500 CF	34,500 CF	40,500 CF
Stage	7.50	7.50	8.80	9.00

 This site is located in flood hazard zone "A-10"; per FIRM maps. Based on the stage-storage curve calculated above, the 100 year flood reaches an elevation of 8.98 NGVD. The lowest finish floor will be set at an elevation of 9.00 NGVD.

DRAINAGE CALCULATIONS:
 Using South Florida Water Management District criteria for stormwater retention facilities as outlined in SFWMD Manual Volume IV:

- I. The Postdevelopment Site Plan shows the following:
 Total Area = 43,002 sf (100%)
 Impervious Area = 30,948 sf (72.0%)
 Roof = 13,115 sf (30.5%)
 Other (asph./walks) = 17,833 sf (41.5%)
 Pervious Area/Open Space = 12,054 sf (28.0%)
- II. Calculate the Required Storage Volume
 1. First inch of runoff over the total site.
 $Q = 43,002 \text{ sf} \cdot 1" \cdot 1' / 12" = 3,584 \text{ cf}$
 2. Runoff of 2.5" times the % Impervious, as calculated per SFWMD section 5.2.2.C, over the total site.
 $\% \text{ Imp.} = (30,948 - 13,115) \text{ sf} / (43,002 - 13,115) \text{ sf} = 0.597 \text{ or } 59.7\%$
 $Q = 2.5" \cdot 1' / 12" \cdot 0.597 = 0.124'$
 $Q = 43,002 \text{ sf} \cdot 0.124' = 5,346 \text{ cf} > 1 \text{st inch use}$
 3. Dry detention will be used therefore the required storage is 75% of the larger volume calculated above, as per section 5.2.1.A.3.
 $Q_{\text{reqd}} = 5,346 \text{ cf} \cdot 0.75 = 4,009 \text{ cf}$
 4. Storage volume provided = 5,556 C.F.

FIRE FLOW CALCULATIONS
 MAXIMUM BUILDING AREA IS 13,115 S.F. OF FLOOR AREA AND IS TO BE DESIGNED AS TYPE V CONSTRUCTION; THEREFORE C = 1.0
 $18 \cdot 1.0 \cdot \sqrt{13,115} = 2,061 \text{ GPM}$
 THE USE OF THE BUILDING IS AN ORDINARY HAZARD OCCUPANCY (GROUP 1 OR 2) AND IS SPRINKLED, THEREFORE:
 $\text{REQUIRED FIRE FLOW} = 1.0 \cdot 2,061 \text{ GPM} \cdot 0.5 = 1,030 \text{ GPM}$
 EXISTING SYSTEM PROVIDES 2,260+ GPM @ 20 PSI RESIDUAL, THEREFORE FLOWS ARE ADEQUATE.

KEY NOTES

1. 12" x 4" TAPPING SLEEVE AND 4" GATE VALVE (SEE DETAIL)
2. 4" DDV (SEE DETAIL)
3. 4" CLASS 53 DIP FIRE LINE
4. 8" x 6" TEE, 8" x 6" REDUCER, 8" VALVE AND 8" BEND
5. CONNECT TO EXISTING WATER SERVICE W/ 3/4" METER AND RPBP AND 1 1/2" SCH 80 PVC WATER SERVICE PER LCU DETAILS
6. CONTROL STRUCTURE (SEE DETAIL)
7. 16 LF. 12" x 18" ERCP W/ M.E.S. AT EL. 5.50
8. SITE CONTRACTOR TO PROVIDE 2" PVC SLEEVE FOR IRRIGATION 24" BELOW FINISH GRADE
9. LIFT STATION SEE SHEET U-2
10. 148 LF. 2" SCH80 PVC FORCE MAIN
11. 80 LF. 12" x 18" ERCP W/ M.E.S. @ EL. 5.50
12. 4" x 2" REDUCER AND 30 LF. ± C900 DR18 PVC FORCE MAIN
13. 8" x 4" S.S. TAPPING SLEEVE W/ 4" RESILIENT SEATED PLUG VALVE
14. 13 LF. 8" C900 DR18 WATER MAIN AND FIRE HYDRANT ASSEMBLY
15. CONNECT TO EXISTING FRONTAGE RD. ESMT WHEN PAVEMENT TO 25' MIN. OWNER TO NEGOTIATE RELOCATION OF SIGNS AND OTHER ENCROACHMENTS, OUT OF ESMT.

TRAFFIC IMPACT DATA/ANALYSIS
 PER ITE RATES, 6TH EDITION FOR RESEARCH DEVELOPMENT CENTER, LAND USE CODE 760: AREA OF BUILDING = 13,115 S.F.
 CALCULATED ADWTE'S FROM ITE = 192
 CALCULATED AMPHTE'S FROM ITE = 23 (19 enter, 4 exit)
 CALCULATED PMPHTE'S FROM ITE = 24 (4 enter, 20 exit)

THE PROJECT ACCESS IS A HIGH SPEED (45+ MPH) ARTERIAL ROAD. IN ACCORDANCE WITH CRITERIA OUTLINED IN LEE COUNTY AC-11-4 Sec. V.A.2.(b) AND Sec. V.A.2., BASED UPON THE TRIP GENERATION CALCULATED AND ASSUMING A 50%-50% SPLIT OF ENTERING & EXITING TRAFFIC.

NO OTHER SITE RELATED IMPROVEMENTS WARRANTED OUTLINED IN LEE COUNTY AC-11-4 ARE MET, THEREFORE NONE ARE REQUIRED OR PROPOSED.

GENERAL NOTES

1. COASTAL SETBACK LINES DO NOT APPLY TO THIS PARCEL.
2. THERE ARE NO APPARENT ENVIRONMENTALLY SENSITIVE LANDS OR HABITAT FOR ENDANGERED SPECIES ON THIS PARCEL.
3. THERE WILL BE NO ADVERSE IMPACTS TO GROUND OR SURFACE WATER WETLANDS, FLOODPLAINS OR RIVERINE AREAS; OR ANY KNOWN ARCHAEOLOGICAL SITES EXPECTED BY THE DEVELOPMENT OF THIS SITE A "CERTIFICATE TO DIG" IS NOT REQUIRED FOR THIS PROJECT PER LEE COUNTY ARCHAEOLOGICAL SENSITIVITY MAP.
4. THERE ARE NO APPARENT FLOWING WELLS ON THIS PARCEL; IF ANY ARE FOUND DURING CONSTRUCTION, THEY WILL BE PLUGGED IN ACCORDANCE WITH S.F.W.M.D. AND D.E.P.S. WELL PLUGGING REQUIREMENTS.
5. ALL ELEVATIONS ARE BASED UPON NGVD 1929, REFER TO SURVEY FOR DESCRIPTION OF BENCHMARK.
6. SOD OR SEED & MULCH (AS DIRECTED BY ENGINEER) ALL SWALES, BERMS, RETENTION/DENTENTION AREAS, AND SLOPES WITHIN LIMITS OF CONSTRUCTION.
7. WATER SERVICE WILL BE PROVIDED BY LEE COUNTY UTILITIES.
8. SEWER SERVICE WILL BE PROVIDED BY LEE COUNTY UTILITIES.
9. NO WELL FOR IRRIGATION OF LANDSCAPED AREA IS PROPOSED.
10. THIS PROJECT LIES IN THE IOWA Mcgregor FIRE DISTRICT.
11. THIS PARCEL IS ZONED "C-1A".
12. THE FLORIDA LAND USE AND COVER CLASSIFICATION FOR THIS SITE IS 191. THE VEGETATION ASSOCIATION IS NATIVE GRASSES.
13. SOIL CLASSIFICATION FOR THIS PARCEL: SCS #28.
14. SEE DATA PRESENTED ABOVE FOR DETAILED TRAFFIC IMPACT ANALYSIS AND TRIP GENERATION FOR THE PROPOSED PROJECT BASED UPON 6th ED. ITE TRIP GENERATION RATES FOR RESEARCH DEVELOPMENT CENTER.
15. PARKING REQUIREMENTS WERE CALCULATED PER Sec. 34-2020(3)(c) GROUP II AND SEC. 34-2020(2) RETAIL:
 8,213 SF OF RETAIL SERVICE: 3 SPACES + 1 PER EMPLOYEE (10) = 13 SPACES REQ'D.
 4,900 SF OF RETAIL: 1 SPACE/200 SF = 25 SPACES REQ'D.
 TOTAL: 12+25 = 38 SPACES REQ'D.
 38 SPACES PROVIDED
 IF THE PARKING LOT IS TO BE USED AT NIGHT, THE OWNER SHALL INSURE THE LIGHTING COMPLIES WITH L.O.S. Sec. 34-2015(2). ALL HANDICAP PARKING SPACES (COMPLETE WITH FLP SIGN "FTP-25 AND "250 FINE" SIGN) AND HANDICAP STRIPING TO COMPLY WITH A.D.A. AND FLA. ACCESSIBILITY STANDARDS.
16. THIS IS A SFWMD "NO NOTICE" PROJECT. PROJECT CONFORMS TO FDOT DRAINAGE PERMIT CRITERIA.
17. THE PROJECT IS IN A "A-10" FLOOD ZONE: ELEV. 9.00.
18. NO MASSES OF EXOTIC SPECIES ARE ON SITE. OWNER SHALL MAINTAIN THE SITE FREE OF EXOTIC SPECIES IN PERPETUITY. (SEE SHEET L-1 FOR LIST OF EXOTIC SPECIES.)
19. UPON COMPLIANCE ALL FEDERAL, STATE, AND LOCAL REGULATIONS BY THE OWNER, THIS SITE MAY BE SAFELY USED FOR BUILDING PURPOSES WITHOUT UNDUE DANGER FROM FLOOD. THE OWNER SHOULD RETAIN THE SERVICES OF A QUALIFIED GEOTECHNICAL ENGINEER TO DETERMINE IF SUBSURFACE CONDITIONS EXIST WHICH MAY ADVERSELY AFFECT THE DEVELOPMENT OF THIS SITE. THE OWNER SHOULD RETAIN THE SERVICES OF A QUALIFIED STRUCTURAL ENGINEER TO DETERMINE CORRECT FOUNDATION DESIGNS FOR ANY PROPOSED STRUCTURES ON THE SITE.
20. CONSTRUCTION OF WATER MAINS OR FIRE LINES, IF SHOWN HEREON, REQUIRE SEPARATE PERMITTING. THE OWNER SHALL INSURE THAT ALL PLANS AND PERMITS BE OBTAINED PRIOR TO CONSTRUCTION BY THE CONTRACTOR.
21. THE ENGINEER HAS NOT BEEN RETAINED FOR CONSTRUCTION INSPECTIONS, SUPERVISION, OR CONTRACT ADMINISTRATION FOR THIS PROJECT. ANY DEVIATIONS FROM THESE PLANS BY THE OWNER OR CONTRACTOR REQUIRES PRIOR APPROVAL OF THE ENGINEER.
22. AT THE REQUEST OF THE OWNER, STORMWATER MANAGEMENT FACILITIES HAVE BEEN DESIGNED TO CONFORM WITH THE MINIMUM REQUIREMENTS OF LEE COUNTY AND/OR ESTABLISHED SFWMD PERMIT DESIGN CRITERIA FOR THIS AREA. DOWNSTREAM DRAINAGE BASIN OUTFALL IS REGULATED BY OTHERS, M.W. MORRIS & ASSOCIATES, INC. CANNOT WARRANT THE WATER MANAGEMENT SYSTEM TO FUNCTION PROPERLY DURING EXTREME STORM EVENTS PERIODS OF MINOR FLOODING MAY OCCUR DURING NON-DESIGN STORM EVENTS.
23. OWNER SHALL INSURE THAT GENERAL CONTRACTOR COMPLIES WITH ALL REQUIREMENTS OF STORM WATER POLLUTION PREVENTION (SWP3) ON FILE WITH THE ENGINEER. A COPY OF SWP3 SHALL BE POSTED ON SITE AT ALL TIMES.

M.W. MORRIS & ASSOCIATES, INC.
 Development Consultants... Civil Engineers... Planners
 11000 METRC PKWY. UNIT #27 FORT MYERS, FLORIDA 33912 (941) 936-5222

PROJECT: RWT BUILDING SAN CARLOS BLVD. FT. MYERS, FLORIDA 33909
DEVELOPER: GULF TO BAY CONSTRUCTION, INC. 14370 MCGREGOR BLVD. FT. MYERS, FL. 33909

DATE: 9/7/99
REVISIONS: 7/8/99
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: 9/7/99
REVISIONS: [Signature]

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JAMES OTTENSMANN, P.E.
 FL. REG. #14743

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