Traffic Impact Study

Shell Gas Station

337 71st Street
Miami Beach, Florida

October 29th, 2013

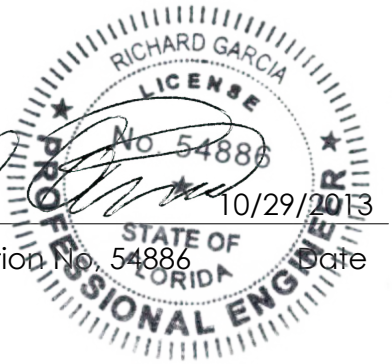
Richard Garcia & Associates, Inc.

Engineer's Certification

I, Richard Garcia, P.E. # 54886, certify that I currently hold an active Professional Engineers License in the State of Florida and am competent through education and experience to provide engineering services in the civil and traffic engineering disciplines contained in this report. In addition, the firm Richard Garcia & Associates, Inc. holds a Certificate of Authorization # 9592 in the State of Florida. I further certify that this report was prepared by me or under my responsible charge as defined in Chapter 61G15-18.001 F.A.C. and that all statements, conclusions and recommendations made herein are true and correct to the best of my knowledge and ability.

Project Description: Shell Gas Station –
Traffic Impact Study

Project Location: 337 71st Street
Miami Beach, Florida



Florida Registration No. 54886 10/29/2013
Date

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Executive Summary

This report was prepared to document the traffic impacts associated with the proposed renovations of the existing Shell gas station located at 337 71st Street in the City of Miami Beach, Florida. The existing gas station has 8 vehicle fueling positions, which will remain at their current location while the proposed renovations consist of adding a convenience market and a car wash. Please note this report was prepared consistent with traffic study methodology discussed with and agreed to by the City of Miami Beach during the scoping phase.

The trip generation characteristics for the subject project were obtained from **ITE's Trip Generation Manual, 9th Edition**. The trip generation calculations were performed for the AM and PM peak hour. The following land uses, as identified by the Institute of Transportation Engineers (ITE), most closely resemble the subject project. These land uses are as follows:

- LU 944: Gasoline/Service Station with 8 Vehicle Fueling Positions
- LU 946 Gasoline/Service Station with Convenience Market and Car Wash with 8 Vehicle Fueling Positions

The ITE trip generation calculations for the AM and PM peak hour revealed that the proposed improvements will not generate new external vehicle trips to the existing gas station.

Moreover, trip generation data was collected at the existing gas station in an effort to validate the ITE trip generation for the subject project. This local data was collected on Tuesday, October 18th, 2013 during the AM and PM peak period of 7:00 to 9:00 AM and 4:00 to 6:00 PM, respectively. As a result, the existing gas station generated **112 vehicle trips** during the **AM peak hour** (i.e. 8:00 to 9:00 AM), which corresponds to a rate of 14.00 vehicle trips per vehicle fueling position. During the **PM peak hour** (i.e. 5:00 to 6:00 PM), the gas station had **136 vehicle trips,** which corresponds to a trip generation rate of 17.00 vehicle trips per vehicle fueling position.

Furthermore, the ITE rates for the gas station with convenience market and car wash were adjusted using a *"Local to ITE ratio" (i.e. AM, 14.00/12.16 = 1.15)* in order to estimate the vehicle trips for the gas station with convenience market and car wash. As a result, the trip generation with local data also revealed that no additional vehicle trips are expected with the addition of a convenience market and a car wash. Please note, without the use of the above trips, the resulting would be negative trips since the existing gas station generated more trips than the proposed ITE land use.

In order to evaluate the traffic impacts as a result of the subject project, Level of Service (LOS) analyses were performed for the existing condition and proposed future condition with and without project traffic at the intersections within the study area. Moreover, since the subject project will not generate additional vehicle trips, the turning movement volumes for the proposed condition with project traffic are expected to be the same as the proposed condition without project traffic. Based on our analyses, all the intersections within the study area are currently operating at an acceptable LOS and will continue to do so for the proposed conditions in 2015. Table 1 below summarizes the results obtained from each condition analyzed. Lastly, the proposed site driveways were also evaluated and resulted in overall LOS A.

Additionally, we have evaluated the internal traffic circulation. The exit of the car wash is approximately 35 feet from the north driveway and consequently, the site is expected to have some vehicular conflicts between traffic entering the site and vehicles exiting the car wash. As such, the subject project will provide signs to indicate vehicles exiting the car wash to utilize the south driveways to exit the site in addition to restricting the north driveway to ingress only as stated in the Traffic Circulation section of this report. The driveway on 71st Street will be restricted to right-in and right-out only traffic while the rest of the vehicle access points will allow entering and exiting traffic.

In conclusion, the subject project will not generate new external vehicle trips. Lastly, the intersections within the study area will maintain the existing LOS B or better for the proposed conditions in 2015.

Table 1: Level of Service Summary

Existing AM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	18.5	B	16.2	N/A	N/A	B	11.3	B	12.4
71 Street & Harding Avenue	Signalized	A	7.6	B	10.9	A	8.7	A	8.2	A	8.8
72 Street & Abbott Avenue	Signalized	B	19.2	B	18.4	N/A	N/A	B	12.3	B	12.8
72 Street & Harding Avenue	Two-Way Stop	A	0.1	A	0.5	A	9.7	A	9.9	A	2.7
Proposed AM Peak Hour Condition		**Intersection Approach**								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	19.8	B	17.5	N/A	N/A	B	11.7	B	13.0
71 Street & Harding Avenue	Signalized	A	7.9	B	11.2	A	8.7	A	8.2	A	9.0
72 Street & Abbott Avenue	Signalized	C	20.6	B	19.7	N/A	N/A	B	12.6	B	13.2
72 Street & Harding Avenue	Two-Way Stop	A	0.1	A	0.4	A	9.8	A	9.9	A	2.7
Existing PM Peak Hour Condition		**Intersection Approach**								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	14.4	B	13.6	N/A	N/A	B	13.3	B	13.5
71 Street & Harding Avenue	Signalized	B	11.4	B	14.6	A	9.8	A	8.1	B	11.7
72 Street & Abbott Avenue	Signalized	B	11.4	B	11.8	N/A	N/A	B	11.5	B	11.5
72 Street & Harding Avenue	Two-Way Stop	A	0.6	A	0.4	B	12.5	B	10.9	A	7.1
Proposed PM Peak Hour Condition		**Intersection Approach**								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	14.8	B	14.1	N/A	N/A	B	13.6	B	13.9
71 Street & Harding Avenue	Signalized	B	11.8	B	15.3	A	9.9	A	8.1	B	12.1
72 Street & Abbott Avenue	Signalized	B	12.0	B	12.4	N/A	N/A	B	11.5	B	11.6
72 Street & Harding Avenue	Two-Way Stop	A	0.6	A	0.4	B	12.9	B	11.0	A	7.3

Driveway Level of Service (LOS)			Approaches								Overall	
	Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
			LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
AM Peak Hour	Driveway 1 & Abbott Avenue	2-Way Stop	N/A	N/A	N/A	N/A	N/A	N/A	A	0.1	A	0.1
	Alley & Abbott Avenue	2-Way Stop	N/A	N/A	C	17.4	N/A	N/A	A	0.1	A	0.2
	Driveway 2 & Abbott Avenue	2-Way Stop	N/A	N/A	C	16.7	N/A	N/A	A	0.0	A	0.1
	Driveway 3 & 71 Street	2-Way Stop	A	0.0	A	0.0	N/A	N/A	A	9.1	A	0.2
PM Peak Hour	Driveway 1 & Abbott Avenue	2-Way Stop	N/A	N/A	N/A	N/A	N/A	N/A	A	0.1	A	0.1
	Alley & Abbott Avenue	2-Way Stop	N/A	N/A	B	13.4	N/A	N/A	A	0.0	A	0.2
	Driveway 2 & Abbott Avenue	2-Way Stop	N/A	N/A	B	13.1	N/A	N/A	A	0.0	A	0.2
	Driveway 3 & 71 Street	2-Way Stop	A	0.0	A	0.0	N/A	N/A	A	9.8	A	0.3

Introduction

This study evaluates the traffic impacts associated with the proposed renovations of the existing Shell gas station located at 337 71st Street in the City of Miami Beach, Florida. The existing gas station has 8 vehicle fueling positions, which will remain at their current location while the proposed renovations consist of adding a convenience market and a car wash. Please note this report was prepared consistent with traffic study methodology discussed with and agreed to by the City of Miami Beach during the scoping phase.

The traffic impacts for the subject project were evaluated by performing Level of Service (LOS) analyses for the AM and PM peak hour at the following intersections:

- 71st Street (SR 934) & Abbott Avenue (SR A1A)
- 71st Street (SR 934) & Harding Avenue
- 72nd Street & Abbott Avenue (SR A1A)
- 72nd Street & Harding Avenue

The LOS analyses were performed for the existing condition and proposed condition with and without project traffic. Moreover, these analyses were performed consistent with the Highway Capacity Manual methodology by utilizing the Synchro 8 software. In addition, the project's driveways were also evaluated for LOS.

Lastly, this report also follows the procedure adopted by the Institute of Transportation Engineer's (ITE) Trip Generation and Traffic Impact Studies Manual. In summary, this document includes the following:

- Trip Generation
- Trip Distribution
- Trip Assignment
- Traffic Counts
- Existing Condition LOS
- Proposed Condition LOS
- Conclusion/Recommendations

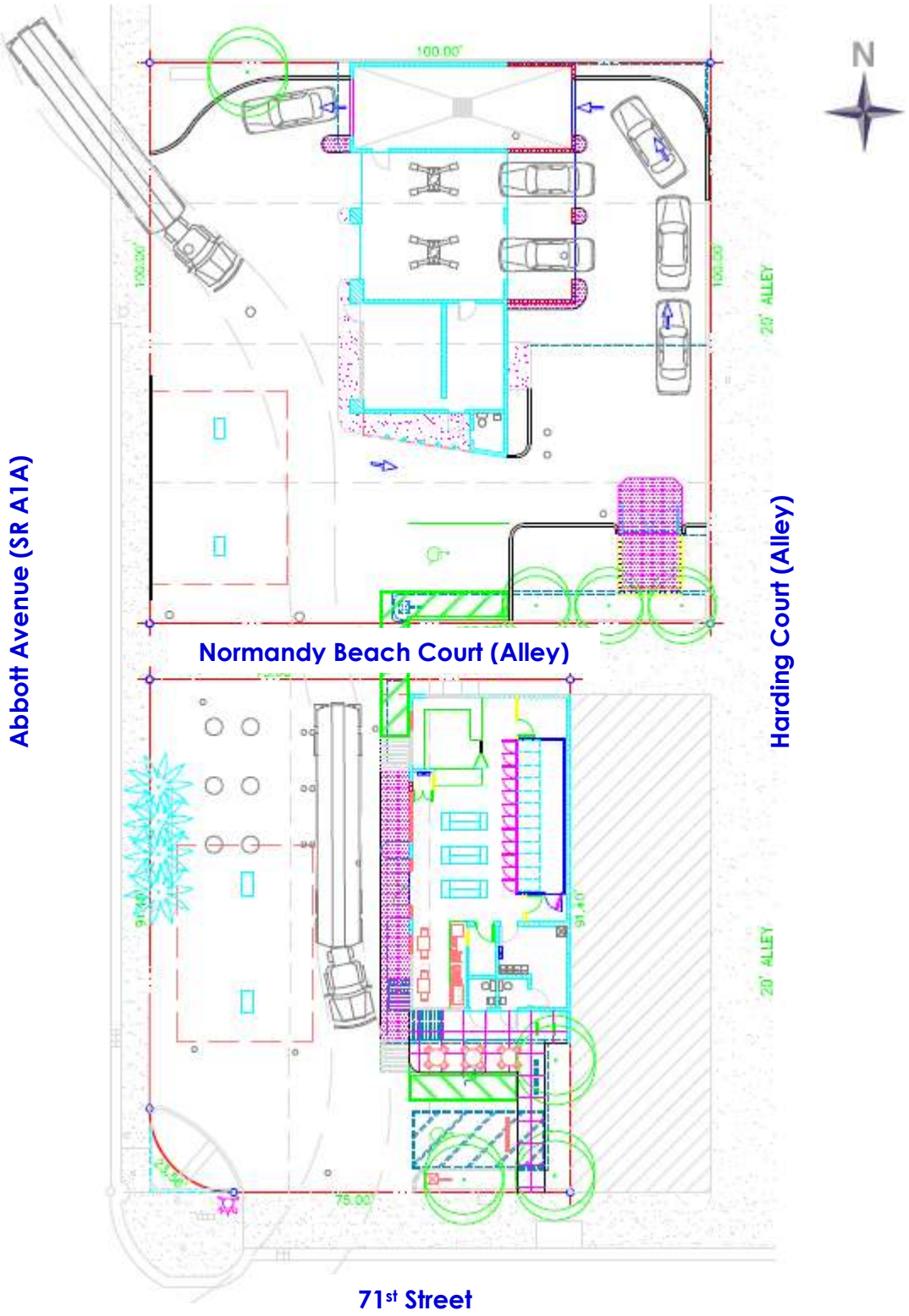
Project Description / Location

The subject site is located on the northeast corner of 71st Street (SR 934) and Abbott Avenue (SR A1A) within the City of Miami Beach's limits. This site is comprised of two (2) parcels that are divided by an existing alley, Normandy Beach Court and currently has a gas station with eight (8) vehicle fueling positions. As previously mentioned, the gas station is intended to add a convenience market and a car wash while the vehicle fueling positions (i.e. pumps) will remain at their current locations.

For vehicular access, the subject site is providing driveways on Abbott Avenue and on 71st Street. Additionally, the existing alley, Normandy Beach Court is being utilized for vehicular access as well. Figure 1 depicts the site's location map while Figure 2 is the site plan provided for illustrative purposes.

Figure 1: Location Map

Figure 2: Site Plan



Existing Condition 2013

This section of the report identifies operational and geometric characteristics of the intersections within the study area. The purpose of this section is to provide a basis of comparison to future conditions. The subject site was visited and inventoried to gather information such as site conditions, adjacent land uses, existing traffic operations, and transportation facilities within the study area.

Transit

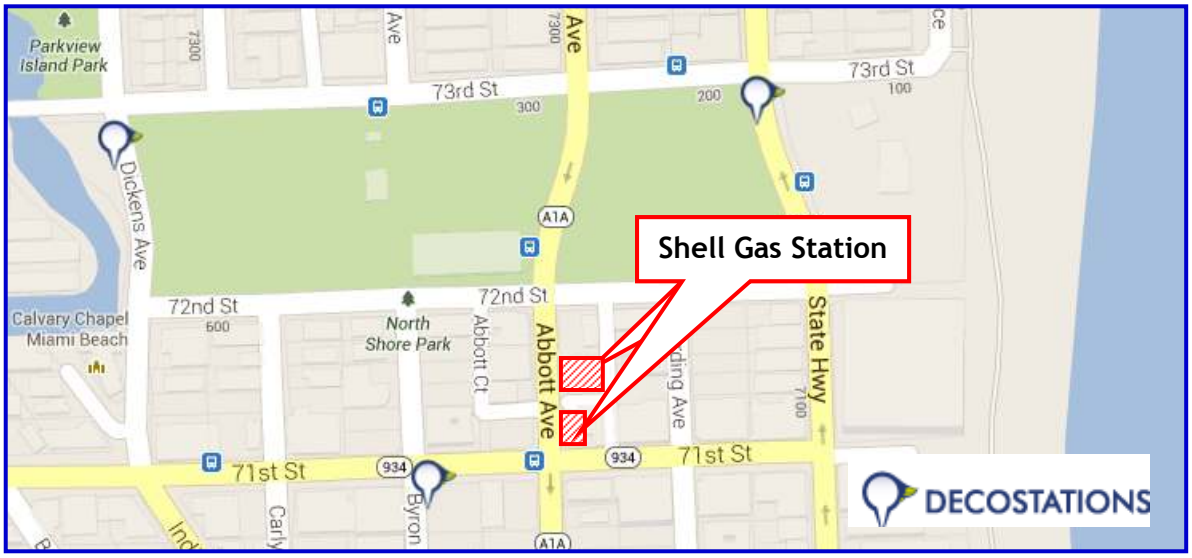
The Shell gas station at 337 71st Street is located within walking distance of public transportation bus stops. These bus stops are serviced by Miami-Dade County Transit (MetroBus). Miami-Dade County MetroBus has ten (10) bus stops within one quarter mile (i.e. 0.25 mile) of the subject project. The proximity of these bus stops is expected to highly encourage employees and customers to utilize the transit modes and consequently reduce the vehicle traffic impacts for the subject project. Figure 3 below depicts the bus stops for Miami-Dade County.

Bicycle

In addition, this report has identified a number of bike stations near the subject project. These are called **DecoBike** stations which were implemented in 2011 as a city-wide public transit program. This transit program consists of bike sharing and is intended to help reducing the need for vehicles throughout the city. As shown in Figure 4 below, three (3) DecoBike stations are located within close proximity of the subject project. Lastly, this transit and bicycle mode is expected and encouraged to be utilized by employees and customers to access the site.

Figure 3: Miami-Dade County Transit System (Metrobus)

Figure 4: DecoBike Stations



Traffic Counts

Manual Turning Movement Counts (TMC's) were taken at the intersections identified below as discussed with and agreed to by the City of Miami Beach during the scoping phase. These counts were taken during the AM peak period of 7:00 AM to 9:00 AM and PM peak period of 4:00 PM to 6:00 PM. Subsequently, the AM and PM peak hour volumes were determined and adjusted for seasonal variations by utilizing the 2012 Florida Department of Transportation (FDOT) Peak Season Conversion Factor for an overly conservative analysis. Please note the appropriate traffic data adjustment is the Seasonal Factor (SF) and not the Peak Season Conversion Factor based on FDOT which is the agency responsible for developing the adjustment factors and their respective uses. FDOT has stated to us the following:

"Unless you are feeding your data into and urban model, use the Seasonal Factors to turn your counts into AADT estimates."

Further, the FDOT Project Traffic Forecasting Handbook 2012 has the following relevant definitions:

- ***SEASONAL FACTOR (SF)*** *– Parameters used to adjust base counts which consider travel behavior fluctuations by day of the week and month of the year. The Seasonal Factor used in Florida is determined by interpolating between the Monthly Seasonal Factors for two consecutive months. (AASHTO)*
- ***PEAK SEASON CONVERSION FACTOR (PSCF)*** *– Used to convert a 24-hour count representing the average weekday daily traffic to PSWADT.*
- ***PEAK SEASON WEEKDAY AVERAGE DAILY TRAFFIC (PSWADT)*** *- The average weekday traffic during the peak season. FSUTMS traffic assignment volume represents Peak Season Average Weekday Traffic (PSWADT) projections for the roads represented in the model highway network. For Project Traffic Forecasting Reports, the PSWADT should be converted to AADT using a MOCF. Note: Currently, there are several model outputs throughout the State that require conversion from PSWADT to AADT using MOCF.*

- ***AADT = ADT x SF x Axle Correction Factor***

Traffic counts and operational characteristics were gathered at the following major intersections:

1. 71st Street (SR 934) & Abbott Avenue (SR A1A)
2. 71st Street (SR 934) & Harding Avenue
3. 72nd Street & Abbott Avenue (SR A1A)
4. 72nd Street & Harding Avenue

Figures 5 and 6 are graphical representations of the existing seasonally adjusted AM and PM peak hour turning movement counts (TMC's), respectively.

Intersection Level of Service (LOS)

Using the existing seasonally adjusted traffic volumes, intersection Level of Service (LOS) analyses were performed for the existing condition during the AM and PM peak hour. These analyses were performed consistent with the current operational traffic characteristics (i.e. lane geometry, traffic control, etc.) and following the Highway Capacity Manual (HCM) methodology. As a result, the intersections within the study area yielded LOS B or better for both the existing AM and PM peak hour condition. Table 2 summarizes the LOS results while Appendix 5 contains the supporting documentation

Table 2: Existing Intersection Level of Service

Existing AM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	18.5	B	16.2	N/A	N/A	B	11.3	B	12.4
71 Street & Harding Avenue	Signalized	A	7.6	B	10.9	A	8.7	A	8.2	A	8.8
72 Street & Abbott Avenue	Signalized	B	19.2	B	18.4	N/A	N/A	B	12.3	B	12.8
72 Street & Harding Avenue	Two-Way Stop	A	0.1	A	0.5	A	9.7	A	9.9	A	2.7
Existing PM Peak Hour Condition		**Intersection Approach**								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	14.4	B	13.6	N/A	N/A	B	13.3	B	13.5
71 Street & Harding Avenue	Signalized	B	11.4	B	14.6	A	9.8	A	8.1	B	11.7
72 Street & Abbott Avenue	Signalized	B	11.4	B	11.8	N/A	N/A	B	11.5	B	11.5
72 Street & Harding Avenue	Two-Way Stop	A	0.6	A	0.4	B	12.5	B	10.9	A	7.1

Figure 5: Existing Seasonally Adjusted AM Peak Hour TMC's

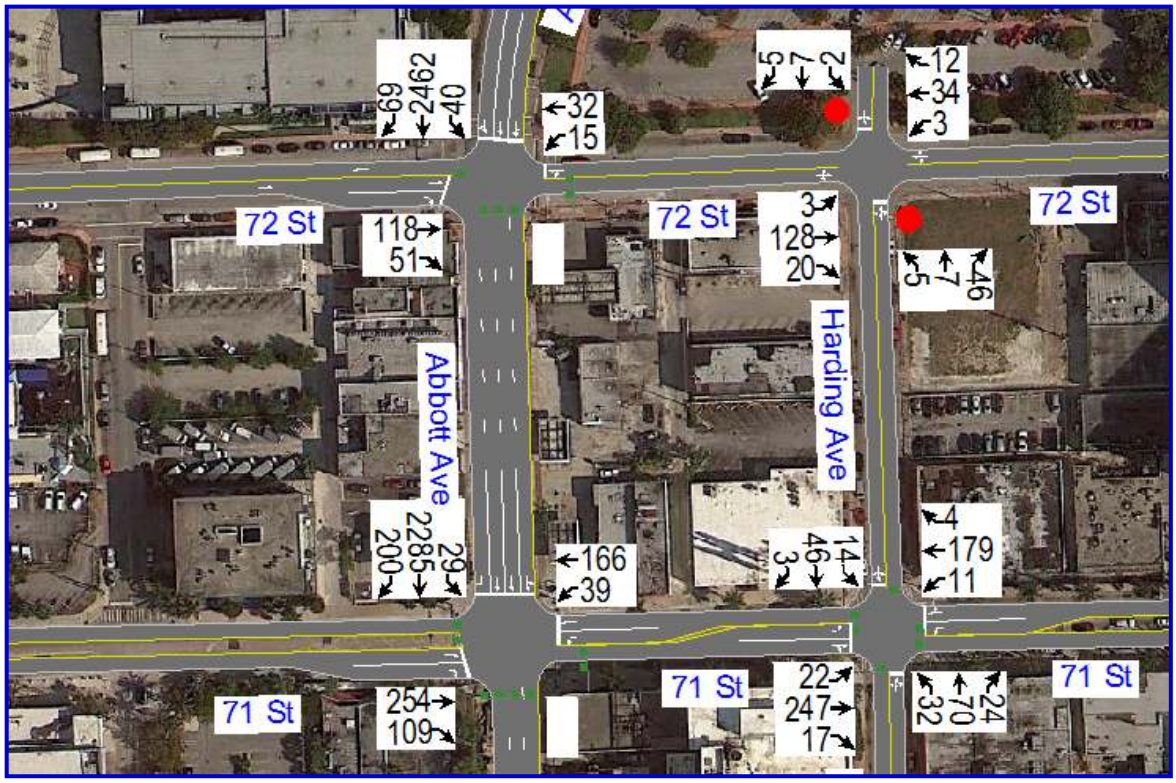
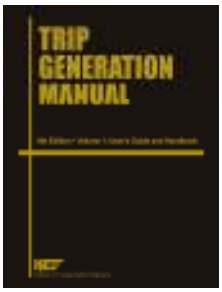


Figure 6: Existing Seasonally Adjusted PM Peak Hour TMC's

Project Traffic

This section of the report will cover the project traffic for the subject project. The trip generation analysis summarized below was performed consistent with the methodology described in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 2nd Edition.

Trip Generation with ITE Data



The trip generation characteristics for the subject project were obtained from **ITE's Trip Generation Manual, 9th Edition**. The trip generation calculations were performed for the AM and PM peak hour. The following land uses, as identified by the Institute of Transportation Engineers (ITE), most closely resemble the subject project. These land uses are as follows:

- LU 944: Gasoline/Service Station with 8 Vehicle Fueling Positions
- LU 946 Gasoline/Service Station with Convenience Market and Car Wash with 8 Vehicle Fueling Positions

The ITE trip generation calculations for the AM and PM peak hour revealed that the proposed improvements will not generate additional traffic to the existing gas station. The ITE rates and percentages for the AM and PM peak hour are included in Appendix 1. Table 3 below summarizes the ITE Trip Generation results.

Table 3: AM & PM Peak Hour Trip Generation (using ITE data)

LAND USE (LU)	UNITS	AM / PM PEAK HOUR					
		ITE LU CODE	PEAK HOUR	ITE TRIP GENERATION RATE	TRIPS		
					IN	OUT	TOTAL
Existing							
Gasoline/Service Station	8 V.F.P.	944	AM	12.16	50	48	98
			PM	13.87	56	55	111
Proposed							
Gasoline/Service Station with Convenience Market and Car Wash	8 V.F.P.	946	AM	11.84	48	47	95
			PM	13.86	57	54	111
External Net New Vehicle Trips (Proposed - Existing Trips)					**-2** / **1**	**-1** / **-1**	**-3** / **0**

NOTES:

Sources: **ITE Trip Generation, 9th Edition** & **ITE Trip Generation Handbook, 2nd Edition.**

Highest Peak Hour

Trip Generation with Local Data

In an effort to validate the ITE trip generation for the subject project, trip generation data was collected at the existing gas station. This local data was collected on Tuesday, October 18th, 2013 during the AM and PM peak period of 7:00 to 9:00 AM and 4:00 to 6:00 PM, respectively. As a result, the existing gas station generated **112 vehicle trips** during the **AM peak hour** (i.e. 8:00 to 9:00 AM), which corresponds to a rate of 14.00 vehicle trips per vehicle fueling position. During the **PM peak hour** (i.e. 5:00 to 6:00 PM), the gas station had **136 vehicle trips,** which corresponds to a trip generation rate of 17.00 vehicle trips per vehicle fueling position.

Moreover, the ITE rates for the gas station with convenience market and car wash were adjusted using a *"Local to ITE ratio" (i.e. AM, 14.00/12.16 = 1.15)* in order to estimate the vehicle trips for the gas station with the future improvements. As you may notice, the trip generation results with local data also revealed that no additional vehicle trips are expected with the addition of a convenience market and a car wash. Table 4 below summarizes the trip generation results with local data.

Table 4: AM & PM Peak Hour Trip Generation (using Local data)

LAND USE (LU)	UNITS	AM / PM PEAK HOUR					
		ITE LU CODE	PEAK HOUR	LOCAL TRIP GENERATION RATE	TRIPS		
					IN	OUT	TOTAL
Existing							
Gasoline/Service Station *	8 V.F.P.	944	AM	14.00	58	54	112
			PM	17.00	66	70	136
Proposed							
Gasoline/Service Station with ** Convenience Market and Car Wash	8 V.F.P.	946	AM	13.63	56	53	109
			PM	16.99	69	67	136
External Net New Vehicle Trips (Proposed - Existing Trips)					**-2** / **3**	**-1** / **-3**	**-3** / **0**

NOTES:

Sources: **ITE Trip Generation, 9th Edition & ITE Trip Generation Handbook, 2nd Edition.**

* Trip Generation characteristics obtained from actual traffic data at the existing site (i.e. Shell Gas Station at 337 71 St)

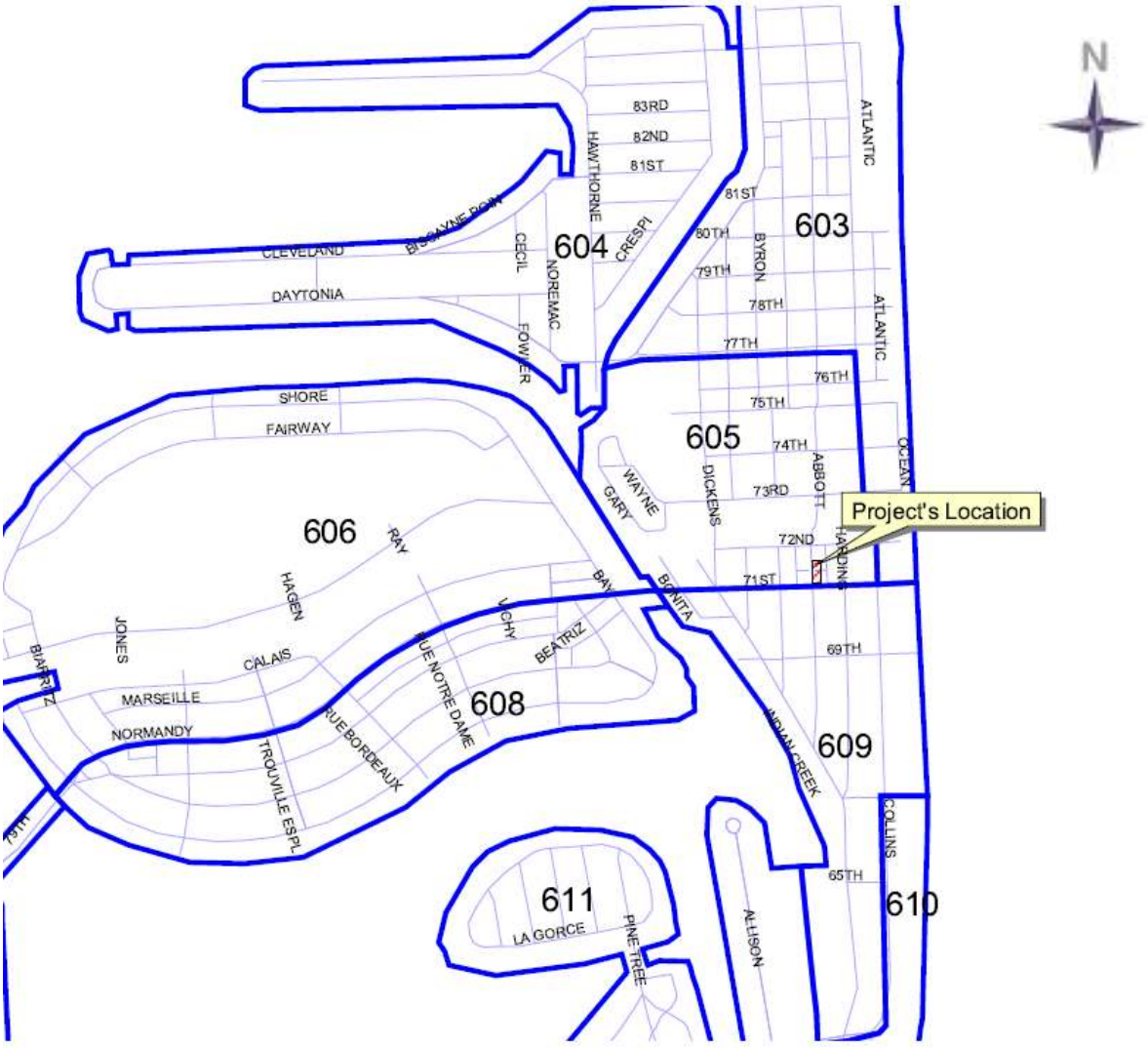
** ITE rates were adjusted using a Local to ITE ratio (i.e. AM, 14.00/12.16 = 1.15) from the existing use data.

Highest Peak Hour

Trip Distribution / Assignments

The subject project is located within the Traffic Analysis Zone (TAZ) 605 as assigned by the Metropolitan Planning Organization's (MPO) on the Miami-Dade Transportation Plan (to the Year 2035) Directional Trips Distribution Report, October 2009. However, since the subject project will not generate new external vehicle trips, traffic distribution and assignment was not performed for this project except for the driveway analysis. Figure 7 below depicts the TAZ map for the study area.

Figure 7: Traffic Analysis Zone Map



Proposed Condition 2015

The following sections describe the parameters utilized to calculate the proposed peak hour volumes.

Background Growth

Using the 2012 Historical AADT Report data from the Florida Department of Transportation's Count Station 5189 (71st Street/SR 934), a regression analysis was performed using the last five years of available historical data. This analysis yielded a trend growth rate of 2.03 percent. Based on our professional opinion, this growth rate is reasonable and therefore, it was applied to the existing traffic counts to address the traffic background growth within the project's vicinity. Appendix 3 contains the supporting documentation.

Planned Roadway Improvements

The 2014 Transportation Improvement Program (TIP) was reviewed for possible roadway improvements near the subject project. The Capacity, Safety and Other Improvements Map in addition to the Reconstruction, Rehabilitation and Resurfacing (RRR) Improvements Map were evaluated for improvements within a five-year horizon. As a result, no projects were identified and therefore, the proposed condition analysis was performed consistent with the existing roadway geometry.

Future AM & PM Peak Hour Volumes

The existing traffic counts for the intersections previously identified were augmented with the background growth to develop the volumes for the proposed condition without project in 2015. Moreover, since the subject project will not generate additional vehicle trips, the turning movement volumes for the proposed condition with project traffic are expected to be the same as the proposed condition without project traffic. The calculations for the specific movements at each intersection are contained in Appendix 4. Figures 8 and 9 depict the proposed AM and PM peak hour volumes, respectively.

Figure 8: Future AM Peak Hour Volumes

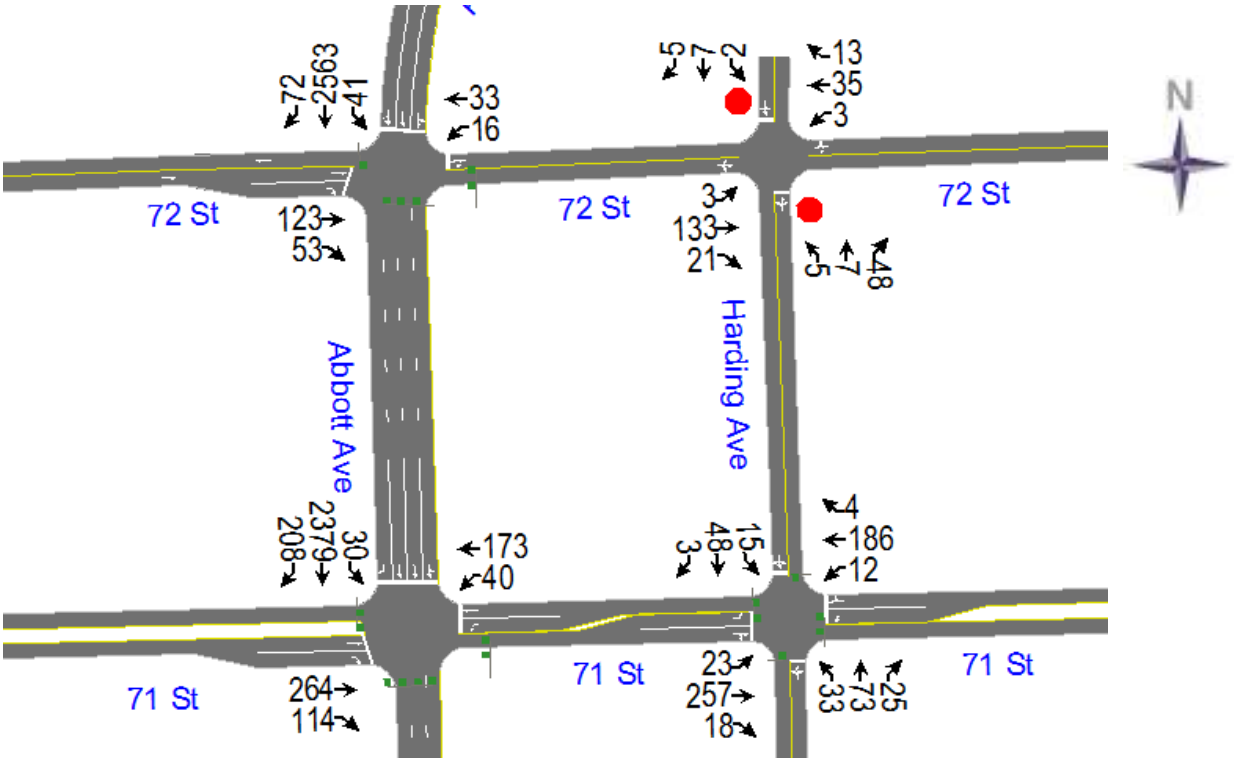
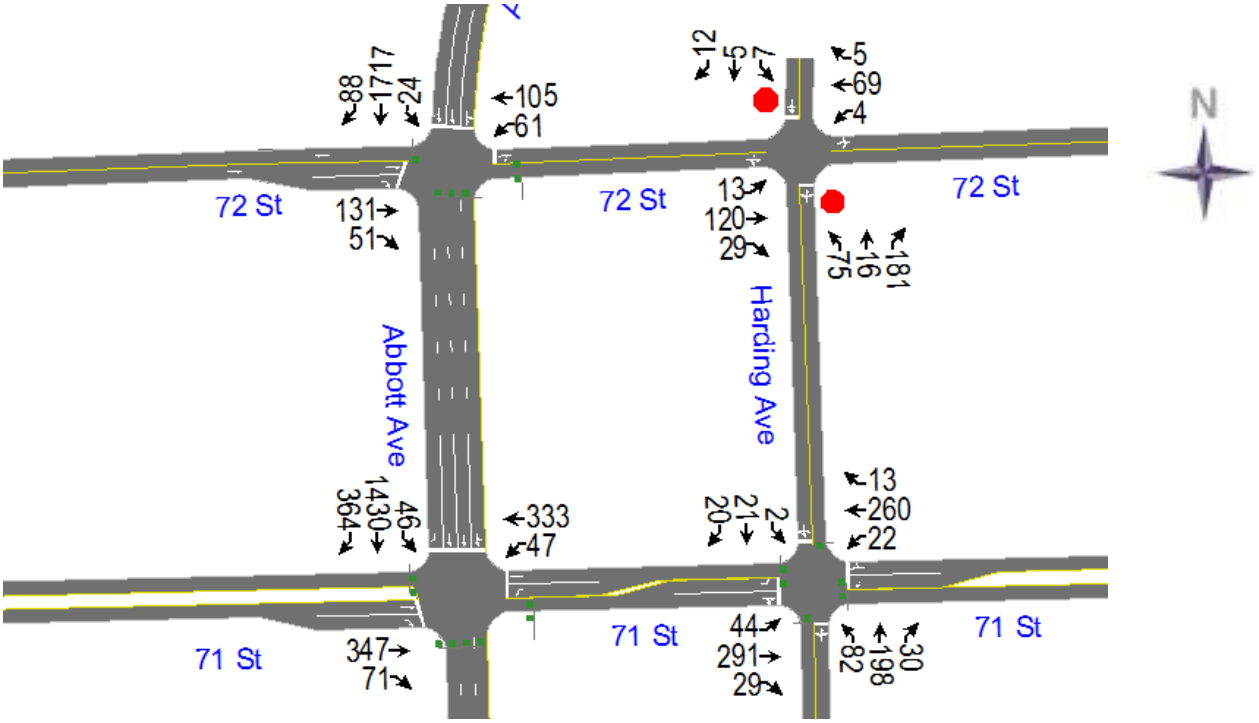


Figure 9: Future PM Peak Hour Volumes



Intersection Level of Service (LOS)

Using the proposed peak hour volumes, Level of Service (LOS) analyses were performed for the intersections within the study area. Based on our analysis, the most impacted intersections will operate at acceptable LOS for the proposed AM and PM peak hour condition. In fact, the intersections will maintain the existing LOS. Table 5 summarizes the LOS results while Appendix 5 includes the Synchro software sheets.

Table 5: Future Intersection Level of Service

Proposed AM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	19.8	B	17.5	N/A	N/A	B	11.7	B	13.0
71 Street & Harding Avenue	Signalized	A	7.9	B	11.2	A	8.7	A	8.2	A	9.0
72 Street & Abbott Avenue	Signalized	C	20.6	B	19.7	N/A	N/A	B	12.6	B	13.2
72 Street & Harding Avenue	Two-Way Stop	A	0.1	A	0.4	A	9.8	A	9.9	A	2.7
Proposed PM Peak Hour Condition		**Intersection Approach**								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound			
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
71 Street & Abbott Avenue	Signalized	B	14.8	B	14.1	N/A	N/A	B	13.6	B	13.9
71 Street & Harding Avenue	Signalized	B	11.8	B	15.3	A	9.9	A	8.1	B	12.1
72 Street & Abbott Avenue	Signalized	B	12.0	B	12.4	N/A	N/A	B	11.5	B	11.6
72 Street & Harding Avenue	Two-Way Stop	A	0.6	A	0.4	B	12.9	B	11.0	A	7.3

Driveway Level of Service Analysis

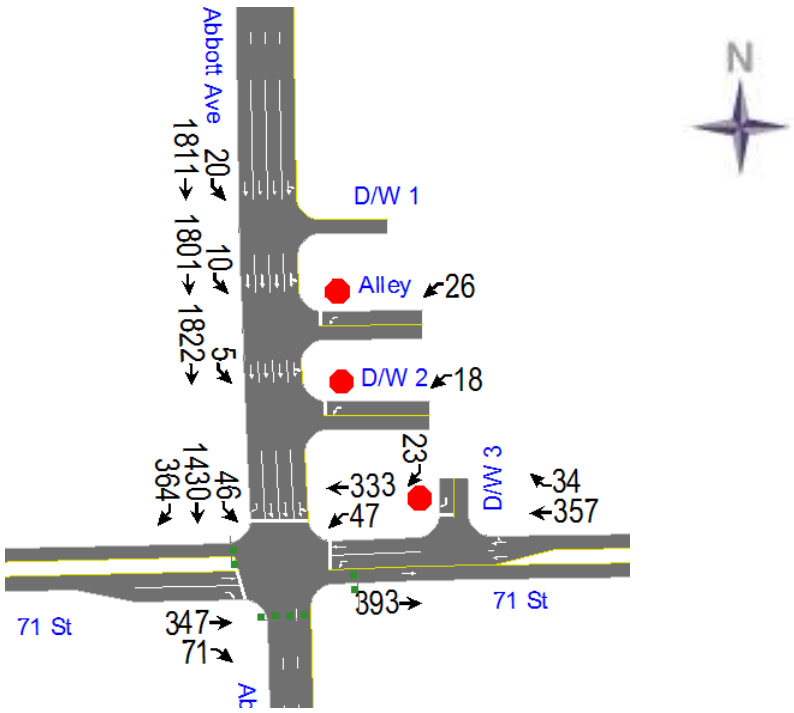
In an effort to evaluate the future traffic operations for the project's driveways, Level of Service analyses were performed utilizing the Synchro 8 software. The gross vehicle trips were distributed and assigned to the driveways consistent with the existing traffic patterns. Moreover, the approach traffic volumes at the driveways were estimated utilizing the future traffic volumes approaching and departing the nearby intersections. Based on our analyses, the project's driveways will operate at acceptable LOS. In fact, the overall traffic operation for each driveway yielded LOS A for both the AM and PM peak hour. Table 6 below summarizes the driveways LOS results. Figures 10 and 11 depict the driveway volumes for the AM and PM peak hour, respectively.

Table 6: Driveway Level of Service

Driveway Level of Service (LOS)			Approaches								Overall	
Location		Intersection Control	Eastbound		Westbound		Northbound		Southbound			
			LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
AM Peak Hour	Driveway 1 & Abbott Avenue	2-Way Stop	N/A	N/A	N/A	N/A	N/A	N/A	A	0.1	A	0.1
	Alley & Abbott Avenue	2-Way Stop	N/A	N/A	C	17.4	N/A	N/A	A	0.1	A	0.2
	Driveway 2 & Abbott Avenue	2-Way Stop	N/A	N/A	C	16.7	N/A	N/A	A	0.0	A	0.1
	Driveway 3 & 71 Street	2-Way Stop	A	0.0	A	0.0	N/A	N/A	A	9.1	A	0.2
PM Peak Hour	Driveway 1 & Abbott Avenue	2-Way Stop	N/A	N/A	N/A	N/A	N/A	N/A	A	0.1	A	0.1
	Alley & Abbott Avenue	2-Way Stop	N/A	N/A	B	13.4	N/A	N/A	A	0.0	A	0.2
	Driveway 2 & Abbott Avenue	2-Way Stop	N/A	N/A	B	13.1	N/A	N/A	A	0.0	A	0.2
	Driveway 3 & 71 Street	2-Way Stop	A	0.0	A	0.0	N/A	N/A	A	9.8	A	0.3

Figure 10: Future Driveway Volumes - AM Peak Hour

Figure 11: Future Driveway Volumes - PM Peak Hour



Transportation Control Measures (TCM)

The developer for the subject project recognizes the need to minimize the single-occupant Auto-Trip Based mode of transportation. As such, every effort will be made to promote the use of various modes available to this site. Such strategies as carpooling and ridesharing will be considered in keeping with the City's effort to alleviate traffic congestion. Additionally, information will be provided to employees and customers of the transit system. Lastly, the subject project is providing bicycle racks to encourage that type of usage.

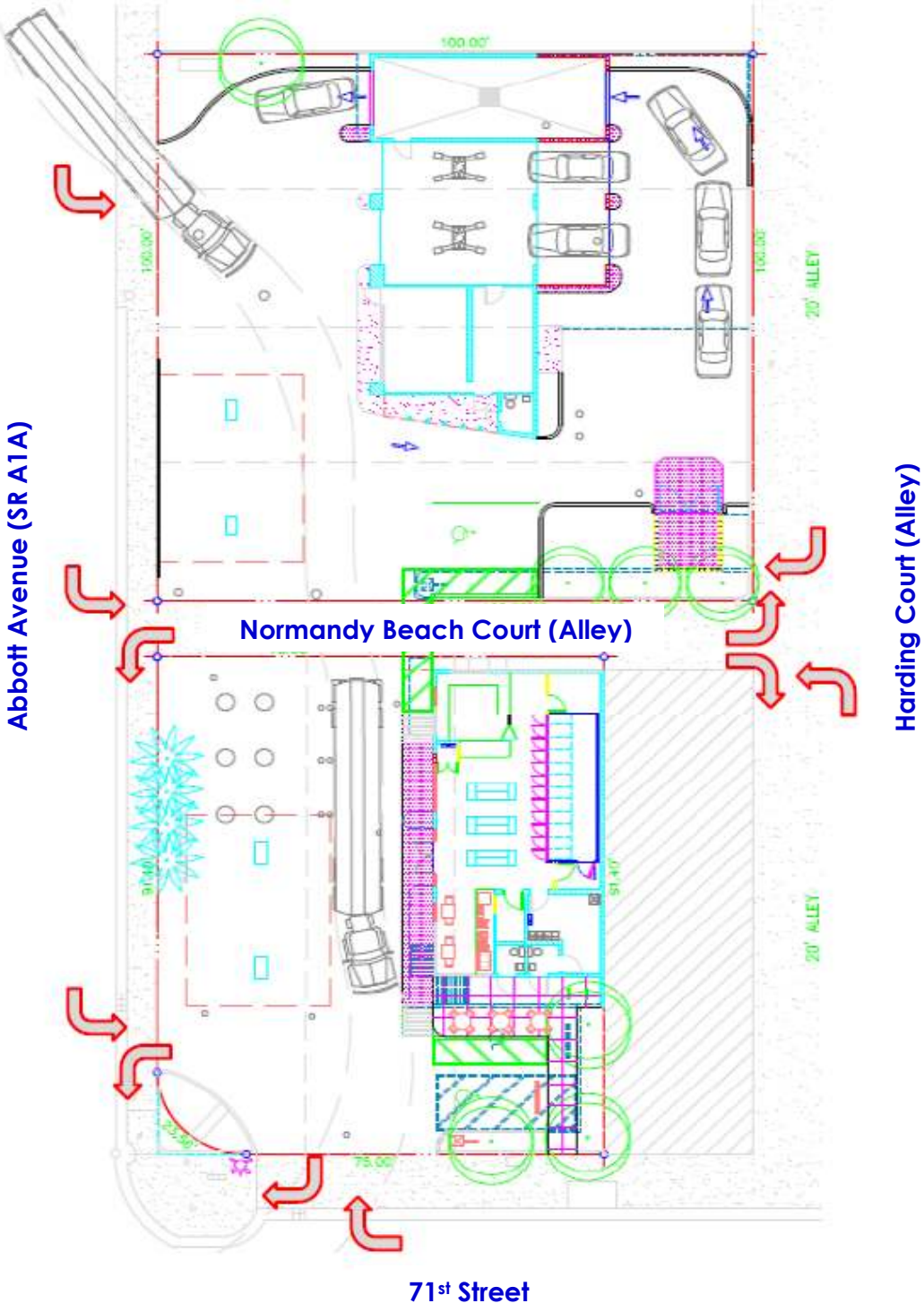
Internal Traffic Circulation

As previously mentioned, vehicles may access the subject project via Abbot Avenue, 71st Street and Harding Court. The north driveway on Abbott Avenue is intended to be restricted to ingress only, which will reduce some of the existing vehicle conflicts between entering and exiting traffic and therefore, can be considered a safety upgrade. The rest of the vehicle access points will allow

entering and exiting traffic. Moreover, the driveway on 71st Street will be restricted to right-in and right-out only traffic.

As shown in the site plan, the subject project has proposed a car wash to the north side of the property. The exit of the car wash is approximately 35 feet from the north driveway and consequently, the site is expected to have some vehicular conflicts between traffic entering the site and vehicles exiting the car wash. As such, the subject project will provide signs to indicate vehicles exiting the car wash to utilize the south driveways to exit the site in addition to restricting the north driveway to ingress only as stated above. Figure 12 depicts the proposed site plan including some of the patterns of the on-site traffic circulation.

Figure 12: On-Site Traffic Circulation



Conclusion

The results documented in this report revealed that the subject project will not generate new external vehicle trips. Additionally, the intersections within the study area are operating adequately and will maintain the existing Level of Service for the proposed AM and PM peak hour conditions in 2015. Lastly, the project's driveways will operate at LOS A.

In conclusion, the subject project will not pose a negative traffic impact within the study area.

Memorandum of Understanding (MOU)

To: Xavier Falconi, P.E.
Miami Beach
Planning Department
1700 Convention Center Drive
Miami Beach, Florida 33139

From: Richard Garcia, P.E.
Richard Garcia & Associates, Inc.
8065 NW 98th Street
Hialeah Gardens, Florida 33016

Date: October 8th, 2013

SUBJECT: Traffic Study Methodology for the Shell Gas Station at 337 71st Street

Based on the subject project location and proposed land use, we have prepared a traffic methodology for your approval. Please review and confirm if this methodology is acceptable in order for us to proceed with data collection and analyses. Should you need clarification or wish to discuss this further please do not hesitate to contact me.

Project Location / Description

The subject site is located on the northeast corner of 71st Street and Abbott Avenue at the 337 71st Street in the City of Miami Beach, Florida. The project consists of the following land uses (LU):

Existing Land Use

- LU 944: Gasoline/Service Station with 8 Vehicle Fueling Positions (VFP)

Proposed Land Use

- LU 946: Gasoline/Service Station with Convenience Market & Car Wash with 8 Vehicle Fueling Positions (VFP)

Based on our preliminary Trip Generation analysis, this project is expected to generate **3 external net new vehicle trips for the AM peak hour** and **zero external net new peak hour trips for the PM peak hour.** The exhibits included herewith depict the subject project location and trip generation analysis. As such, we are proposing the following traffic study methodology:

Traffic Study Methodology

- Trip Generation / Trip Distribution / Trip Assignment
  - All trip generation information will be based on the 9th Edition of the ITE Trip Generation Manual.
  - Trip Distribution and Assignment shall be based on the Traffic Analysis Zone (TAZ) for the project location. Trips will be distributed using the current adopted Miami Dade MPO Long Range Transportation Plan (SERPM).

- Traffic Counts
  - Two-hour (2) AM peak period TMC's (7:00 AM – 9:00 AM) and Two-hour (2) PM peak period TMC's (4:00 PM – 6:00 PM) including trucks and pedestrians will be performed at the following intersections:
    1. **71st Street & Abbott Avenue** (Signalized)
    2. **71st Street & Harding Avenue** (Signalized)
    3. **72nd Street & Abbott Avenue** (Signalized)
  - Traffic signals shall be identified by Miami-Dade County Asset ID. Existing Signal Phasing/Timing shall be utilized in the analysis.
- Committed Development / Background Growth
  - All committed development within the study area shall be quantified as provided by the City of Miami Beach.
  - Existing traffic will be adjusted with an annual growth factor for the future condition. The growth factor will be determined utilizing the available FDOT and Miami-Dade County historical data.
- Build Out Year (2015)
  - This represents a date in the future in which the facility/ development will be operational.
- Level of Service (LOS)
  - Intersection capacity /LOS will be performed based on HCM methodology and using Synchro. Such analysis will provide the results for the Level of Service (LOS), volume to capacity ratio (V/C) and other outputs such as Vehicular Delay. Lastly, the proposed driveways will be evaluated for LOS.
  - Driveway analysis will be performed at the project's vehicular access points.
  - Above analysis will be performed for the following conditions:
    1. Existing Condition Base Year (2013)
    2. Proposed Future Condition without Project (2015)
    3. Proposed Future Condition with Project (2015)

<u>The above will be depicted with graphics in the traffic report.</u>

LAND USE (LU)	UNITS	AM / PM PEAK HOUR					
		ITE LU CODE	PEAK HOUR	ITE TRIP GENERATION RATE	TRIPS IN	TRIPS OUT	TRIPS TOTAL
Existing							
Gasoline/Service Station	8 V.F.P.	944	AM	12.16	50	48	98
			PM	13.87	56	55	111
Proposed							
Gasoline/Service Station with Convenience Market and Car Wash	8 V.F.P.	946	AM	11.84	48	47	95
			PM	13.86	57	54	111
External Net New Vehicle Trips (Proposed - Existing Trips)					**2** / **-1**	**1** / **1**	**3** / **0**

NOTES:

Sources: **ITE Trip Generation, 9th Edition** & **ITE Trip Generation Handbook, 2nd Edition.**

Highest Peak Hour

TECHNICAL MEMORANDUM

DATE: June 4, 2014

TO: Xavier Falconi, PE
PLANNING DEPARTMENT
1700 Convention Center Drive
Miami Beach, FL 33139

FROM: Richard Garcia, P.E.
Richard Garcia & Associates, Inc.
8065 NW 98th Street
Hialeah Gardens, Florida 33016

SUBJECT: Shell Gas Station at 337 71st Street Traffic Impact Analysis Responses

We have reviewed the traffic comments from The Corradino Group dated June 4, 2014 for the subject project and have prepared the following responses.

Traffic

1. Page 13 / Trip Generation Table 4 – For consistency, use and compare only ITE rates for LU Codes 944 and 946 for determining external net new vehicle trips.

   Response: This comparison was included within the Appendix of the report at Table A1, but was not documented in the report body. We have included that analysis herewith. Please note, both trip generation analyses yielded the same results.

2. Synchro Analysis (signalized intersections) – Non-actuated (NA) signal control type should be used in Synchro LOS analysis instead of actuated/coordinated. Please see the attached **MDC signal asset listing** showing the project's signalized intersections as non-actuated (NA). Please revise analysis and result tables accordingly.

   Response: We have contacted Miami-Dade County Signals and Signs Division to confirm if the signalized intersections are operating under Actuated signal control. It seems the MDC signal asset listing sheet provided by the reviewer is not up to date. However, the signal timing sheets provided in our traffic report are current and included the correct signal timing and the correct actuated signal control. Please note, all the timing plans shown on the timing sheet have a corresponding "Offset." The Offset is used to coordinate the subject signal with the adjacent signals, which is a clear indication of the signal operating as actuated/coordinated control.

Attachments

TABLE: A1

Shell Gas Station at 337 71st Street

Trip Generation Analysis - AM & PM Peak Hour (Using ITE Rates)

LAND USE (LU)	UNITS	AM / PM PEAK HOUR							
		ITE LU CODE	PEAK HOUR	ITE TRIP GENERATION RATE	TRIPS				
					%	IN	%	OUT	TOTAL
Existing									
Gasoline/Service Station	8 V.F.P.	944	AM	12.16	51%	50	49%	48	98
			PM	13.87	50%	56	50%	55	111
Proposed									
Gasoline/Service Station with Convenience Market and Car Wash	8 V.F.P.	946	AM	11.84	51%	48	49%	47	95
			PM	13.86	51%	57	49%	54	111
External Net New Vehicle Trips (Proposed - Existing Trips)					**0%**	**-2**	**0%**	**-1**	**-3**
					0%	**1**	**0%**	**-1**	**0**

NOTES:

Sources: **ITE Trip Generation, 9th Edition & ITE Trip Generation Handbook, 2nd Edition.**

Highest Peak Hour

CORRADINO

Date:	June 4, 2014
To:	Xavier Falconi Planning Department City of Miami Beach, FL
From:	Salman Rathore, PE
Project #:	TCG# 3904-21
Subject:	Shell Gas Station 337 71st Street Traffic Impact Analysis Review

MEMORANDUM

Location: 337 71st Street, City of Miami Beach, FL

Traffic

Mr. Falconi, this memorandum documents the findings of the detailed review of the proposed Shell Gas Station 337 71st Street Traffic Impact Study prepared by Richard Garcia & Associates, Inc. dated October 29, 2013. The comments are as follows:

1. Page 13 / Trip Generation Table 4 – For consistency, use and compare only ITE rates for LU Codes 944 and 946 for determining external net new vehicle trips.
2. Synchro Analysis (signalized intersections) – Non-actuated (NA) signal control type should be used in Synchro LOS analysis instead of actuated/coordinated. Please see the attached **MDC signal asset listing** showing the project's signalized intersections as non-actuated (NA). Please revise analysis and result tables accordingly.

4055 NW 97th AVENUE • MIAMI, FL 33178
TEL 305.594.0735 • 800.887.5551
FAX 305.594.0755
WWW.CORRADINO.COM

CORRADINO

Date:	June 6, 2014
To:	Xavier Falconi Planning Department City of Miami Beach, FL
From:	Salman Rathore, PE
Project #:	TCG# 3904-21
Subject:	Shell Gas Station 337 71st Street Traffic Impact Analysis Review

MEMORANDUM

Location: 337 71st Street, City of Miami Beach, FL

Traffic

Mr. Falconi, this memorandum documents the findings of the detailed review of the proposed Shell Gas Station 337 71st Street Traffic Impact Study prepared by Richard Garcia & Associates, Inc. dated October 29, 2013. The responses to peer review comments memo dated June 4, 2014 along with the email correspondence between Mr. Richard Garcia and Miami-Dade County Public Works and Waste Management Department dated June 6, 2014 was also reviewed in detail. Based on the review of the above we have found the results of the traffic study as satisfactory.

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Miami-Dade County Traffic Signals

Alphabetical Listing of powered traffic control equipment as of 12/27/2013

LEGEND

Signals Types (ST)

Code	Name
Signals:	
FA	Fully-Actuated
GC	Ground Construction Only
NA	Non-Actuated
PA	Mid-block Peds (Standard)
PE	Pre-Empt Only Actuated
PF	Mid-block Peds (Flasher)
PS	Pre-Empt Slave
SA	Actuated (Semi)
SL	Slave
Non School Signs:	
SB	Bus Zone
SC	Curve Ahead
SD	Stop Ahead
SE	Ped Crossing Flasher
SF	Speed Feedback
SG	Bridge Open
SH	Height Warning
SJ	Junction Ahead
SM	Speed Limit
SP	Ped Crossing Ahead
SQ	Queue Backup
SR	Railroad Ahead
SS	Stop Sign
ST	Signal Ahead
SX	Turn Restriction
Other Types:	
RL	Reversible Lane
FL	Flashing Beacon
SZ	School Speed Zone Sign

Features

Code	Description
S	Special Function is Scheduled
V	Variable Phasing is Available
X	Exclusive Ped Phase Exists
H	Ped Heads Exist
P	Ped Buttons Exist w/o Ped Head
F	Flash Operation is Scheduled
T	Time Clock Exists
I	Isolated Operation is Scheduled
L	Local Preemption
R	Remote Preemption

Maintenance Zones (M)

ID	Name
1	Miami Beach / Downtown Miami
2	Northeast Miami-Dade
3	Northwest Miami-Dade
4	Miami / Coral Gables
5	West Miami-Dade
6	South Miami-Dade

Engineering Zones (E)

ID	Name
1	Miami Beach - WP
2	NE Miami-Dade / NMB - FP
3	NW Miami-Dade / Hialeah -DO
4	West / Southwest -RF
5	Central / Southwest -FB
6	Central / Northwest -RC
7	Tamiami Park / Sweetwater -HH
8	South -CV
10	Central -RM
11	North Miami-Dade -EZ
12	SE Miami-Dade -MH
13	Airport / Doral -RI

Jurisdictions (J)

ID	Name
1	Miami
2	Miami Beach
3	Coral Gables
4	Hialeah
5	Miami Springs
6	North Miami
7	North Miami Beach
8	Opa-locka
9	South Miami
10	Homestead
11	Miami Shores
12	Bal Harbour
13	Bay Harbor Islands
14	Surfside
15	West Miami
16	Florida City
17	Biscayne Park
18	El Portal
19	Golden Beach
20	Aventura
21	Indian Creek Village
22	Medley
23	North Bay Village
24	Key Biscayne
25	Sweetwater
26	Virginia Gardens
27	Hialeah Gardens
28	Pinecrest
29	Sunny Isles Beach
30	Miami Lakes
31	Palmetto Bay
32	Miami Gardens
33	Doral
34	Cutler Bay
40	Miami-Dade County

Construction Status (CS)

Code	Name
FC	Future Const.
UC	New Const.
	Existing
RC	Reconstructing
XX	Removed

System Control (SC)

ID	Name
0	None
1	ATMS-Enhanced
4	ATMS

Funding

Code	Name
N	National
S	Federal Aid State
F	Federal Aid Non-State
L	Non-Federal Aid

Sec = UTCS Online Control Section Number
Yr = Year of Most Recent Significant Reconstruction

Any corrections or requests for printouts or electronic files should be brought to the attention of Eloy Lee at the Miami-Dade County Traffic Control Center: 305-592-8925 x243, leee@miamidade.gov

ID		Location		Yr	ST	SC	Features	J	E	M	F	CS	Sec
6706	11 St	@ Jefferson Av		12	SE			2	1	1	F		81
3395	17 St	/ Meridian Av		08	PA	4	F,I,X,H	2	1	1	F		191
6913	17 St	/ Pennsylvania Av	/ Washington Av		PA			2	1	1	F	FC	191
5621	23 St	@ Park Av		08	SZ			2	1	1	F		82
6826	39 St	@ 800 Blk		09	SZ			2	1	1	L		
4872	77 St	@ 600 Blk		13	SZ			2	1	1	F		186
6460	77 St	@ 900 Blk	(West of Tatum	13	SZ			2	1	1	F		186
2816	77 St	/ Tatum Wtrwy Dr		09	PA	4	F,S,H,X,I	2	1	1	F		186
5921	77 St EB	@ Tatum Wtrwy Dr		09	SC			2	1	1	F		186
2784	77 St WB	@ Tatum Wtrwy Dr		09	SC			2	1	1	F		186
4344	96 St	@ 500 Blk	(Bal Harbor Shops)	11	SA	4	F,H	14	1	1	S		276
6751	183 St	@ 100 Blk		08	SZ			29	2	2	L	UC	91
2636	Abbott Av	& 69 St		13	NA	4	H	2	1	1	S		21
2637	Abbott Av	& 71 St		13	NA	4	H	2	1	1	S		21
2638	Abbott Av	& 72 St		13	NA	4	H	2	1	1	S		21
2723	Abbott Av	& Indian Creek Dr		09	SA	4	H	2	1	1	S		21
5951	Abigail Rd	& Spoke Rd		10	SA	1		20	11	2	L		38
3014	Adventure Av	& J. F. Kennedy Cswy		12	SA	1	H,F	23	1	1	S		67
3458	Ahmad St	& Sharazad Blvd		10	SA	4		8	6	3	L		101
3788	Alatka St	& Bayshore Dr S		11	SA	4	I,H	1	12	4	F		162
4417	Alcazar Av	& Ponce De Leon Blvd		11	NA	4	H,F	3	10	4	F		63
4414	Alcazar Av	& Salzedo St		11	NA	4	F,H	3	10	4	L		63
3739	Alhambra Cir	& Bird Rd		11	SA	4	P,F	3	10	4	S		49
4189	Alhambra Cir	& Cadiz Av		08	SS			3	10	4	F		150
2607	Alhambra Cir	& Coral Way		10	SA	4	P,F	3	10	4	F		150
2588	Alhambra Cir	& Granada Blvd		10	SA	4	I,F,P	3	10	4	F		45
2587	Alhambra Cir	& LeJeune Rd		08	SA	4	H,S,I	3	10	4	S		64
6117	Alhambra Cir	/ LeJeune Rd	/ Salzedo St		PA			3	10	4	F	FC	63
2585	Alhambra Cir	& Ponce De Leon Blvd		11	SA	4	I,H	3	10	4	F		63
6116	Alhambra Cir	/ Ponce De Leon Blvd	/ Salzedo St		PA			3	10	4	F	FC	63
2586	Alhambra Cir	& Salzedo St		11	NA	4	H,F	3	10	4	F		63
2619	Alhambra Cir	& Sevilla Av		10	SA	4	I,P,F	3	10	4	F		150
4413	Alhambra Cir S	& Ponce De Leon Blvd		08	SA	4	S,H,I,F	3	10	4	L		73
3669	Alhambra Cir S	& US-1		10	SA	4	S,H	3	10	4	S		1
3580	Alhambra Plz	& Douglas Rd		11	SA	4	I,H,S,F	1	10	4	F		63
5169	Alhambra Plz	& Galiano St		10	SA	4		3	10	4	F		63
5307	Ali Baba Av	@ 900 Blk	(Sinbad Av)	09	SZ			8	6	3	F		101
5308	Ali Baba Av	@ 1200 Blk	(Ahmad St)	09	SZ			8	6	3	F		101
2971	Ali Baba Av	/ Codadad St		11	PA	4		8	6	3	F		101
5057	Ali Baba Av	& Douglas-LeJeune		10	SA	4	I,P	8	6	3	F		205
2976	Ali Baba Av	& NW 22 Av		09	SA	4	F,H,S	8	11	3	F		285
2977	Ali Baba Av	& NW 27 Av		11	SA	4	H,I	8	6	3	S	RC	59
2975	Ali Baba Av	& Opa-Locka Blvd		11	SA	4	H,X,I,F	8	6	3	F		101
2639	Allison Rd	& 63 St		09	SA	4	H	2	1	1	S		231
2589	Almeria Av	& Ponce De Leon Blvd		13	NA	4	F,H	3	10	4	F		63
4119	Almeria Av	& Salzedo St		10	NA	4	H,F	3	10	4	L		63
3272	Altara Av	& LeJeune Rd		12	SA	4	F,H	3	10	4	S		49
6857	Alton Rd	& 1 St			SA			2	1	1	F	FC	14
5615	Alton Rd	@ 100 Blk		13	SZ		T	2	1	1	S		14
6919	Alton Rd	& 2 St		13	SA	4		2	1	1	S		14
7290	Alton Rd	@ 4 St			SE			2	1	1	S	FC	
5614	Alton Rd	@ 400 Blk		08	SZ			2	1	1	S		18
2640	Alton Rd	& 5 St		13	SA	4	H,S,I	2	1	1	S	RC	18
2641	Alton Rd	& 6 St		13	SA	4	I,H	2	1	1	S	RC	8
2642	Alton Rd	& 8 St		13	SA	4	H,S	2	1	1	S	RC	8
3372	Alton Rd	& 10 St		10	SA	4	H	2	1	1	S		8
2643	Alton Rd	& 11 St		13	SA	4	H	2	1	1	S	RC	8
4631	Alton Rd	& 12 St		13	SA	4	X,H,V,S	2	1	1	S	RC	8
7361	Alton Rd	@ 13 St			SE			2	1	1	S	FC	

ID		Location		Yr	ST	SC	Features	J	E	M	F	CS	Sec
2609	Giralda Av	& Salzedo St		10	NA	4	H,F	3	10	4	L		63
2573	Granada Blvd	/ Benevento Av		11	PA	4		3	10	4	F		73
6415	Granada Blvd	& Hardee Rd			SA			3	10	4	F	FC	215
2618	Granada Blvd	& Ponce De Leon Blvd		10	SA	4	S	3	10	4	F		73
6886	Granada Blvd	& Sunset Dr			SA			3	10	4	F	FC	215
2626	Granada Blvd	& SW 8 St		08	SA	4	H,F,S	1	10	4	S		45
2623	Granada Blvd	& US-1		13	SA	4	S	3	10	4	S		1
4948	Grand Av	@ 210 Blk	(Lincoln Dr)	08	SZ			3	12	4	F		48
4947	Grand Av	@ 290 Blk	(Jefferson St)	08	SZ			3	12	4	F		48
2574	Grand Av	/ Jefferson St		10	PA	4	F,H,S,I,X	3	12	4	F		48
2617	Grand Av	& LeJeune Rd		12	SA	4	H	3	12	4	S	RC	34
5374	Grand Av	@ Main Hwy		08	SZ			1	12	4	F		48
2207	Grand Av	& Main Hwy		11	FA	4	S,I,H	1	12	4	F		48
5373	Grand Av	@ Matilda Av		08	SZ			1	12	4	F		48
3793	Grand Av	& SW 32 Av		11	SA	4	I,H	1	12	4	F		48
2620	Grand Av	& US-1		10	SA	4	P	3	12	4	S		34
4851	Gratigny Pkwy	& Red Rd N		13	SA	4	F,S	4	3	3	S		40
4852	Gratigny Pkwy	& Red Rd S		13	SA	4	I,F	4	3	3	S		40
2540	Griffing Blvd	& N Miami Blvd		11	SA	4	I,P	6	2	2	S		108
2528	Griffing Blvd	& NE 6 Av		08	SA	4	I,H	17	2	2	S		90
4201	Griffing Blvd	@ NE 800 Blk	(2 Flashers)	09	SC			17	2	2	F		90
2535	Griffing Blvd	& W Dixie Hwy		11	SA	4		6	2	2	S		107
6234	Gulfstream Rd	@ Montego Bay Blk		08	SZ			34	8	6	L		176
5868	Gulfstream Rd	@ SW 19000 Blk		12	SZ			34	8	6	L		176
5867	Gulfstream Rd	@ SW 19400 Blk		12	SZ			34	8	6	L		176
5721	Hammocks Blvd	& Kendall Dr	& SW 150 Av	13	SA	4	I	40	4	6	S	RC	164
5524	Hammocks Blvd	@ SW 9000 Blk		08	SZ		T	40	4	6	F		250
5525	Hammocks Blvd	@ SW 9200 Blk		09	SZ			40	4	6	F		250
5770	Hammocks Blvd	& SW 96 St		11	SA	4		40	4	6	F		250
7257	Hammocks Blvd	@ SW 9900 Blk		13	SF			40	4	6	F		
7258	Hammocks Blvd	@ SW 9940 Blk		13	SF			40	4	6	F		
5719	Hammocks Blvd	@ SW 9980 Blk		08	SZ		T	40	4	6	F		250
5325	Hammocks Blvd	@ SW 10000 Blk		12	SA	4		40	4	6	F		250
5265	Hammocks Blvd	& SW 104 St		08	SA	4		40	4	6	F		250
6494	Hammocks Blvd	& SW 112 St		08	SA	4		40	4	6	L		202
5870	Hammocks Blvd	& SW 147 Av		11	SA	4		40	4	6	F		202
5718	Hammocks Blvd	@ SW 15100 Blk	(@ SW 9600 Blk)	08	SZ			40	4	6	F		250
5673	Hammocks Blvd	& SW 152 Av		11	SA	4		40	4	6	F		250
7256	Hammocks Blvd	@ SW 15200 Blk		13	SF			40	4	6	F		
7091	Hammond Dr	@ 1400 Blk		11	SZ			5	13	3	L		
7092	Hammond Dr	@ 1500 Blk		11	SZ			5	13	3	L		
6845	Harbor Dr	@ 100 Blk		10	SZ			24	12	1	F		190
6844	Harbor Dr	@ 150 Blk		10	SZ			24	12	1	F		190
5156	Hardee Rd	@ 1000 Blk		08	SJ			3	10	4	L		215
5157	Hardee Rd	@ 1100 Blk		09	SJ			3	10	4	L		215
4613	Hardee Rd	& LeJeune Rd		11	SA	4	I,F,H,P	3	10	4	F		215
6573	Harding Av	& 69 St		09	FA	4		2	1	1	L		21
3544	Harding Av	& 71 St		12	NA	4	H	2	1	1	S		21
3197	Harding Av	& 73 St		13	NA	4	H	2	1	1	S		21
2711	Harding Av	& 74 St		13	NA	4	H	2	1	1	S		21
2712	Harding Av	& 75 St		10	SA	4	H	2	1	1	S		21
2713	Harding Av	& 77 St		10	SA	4	H,F	2	1	1	S		21
2714	Harding Av	& 81 St		10	SA	4	H	2	1	1	S		21
2715	Harding Av	& 85 St		10	SA	4	H	2	1	1	S		21
2717	Harding Av	@ 8700 Blk	(2 Signs)	09	SC			2	1	1	S		21
2914	Harding Av	& 88 St		12	SA	4	H	14	1	1	S		21
4532	Harding Av	@ 9000 Blk	(2 Signs)	08	SC			14	1	1	S		22
2916	Harding Av	& 91 St		10	SA	4	H	14	1	1	S		22
3185	Harding Av	& 93 St		10	NA	4	H,F	14	1	1	S		22

Customer ID:67.151.62.90
Location ID: 359
Data Last Update: 9/26/2012 11:33:18 AM
Last Assessment:

Veeder Count:

Account: 408931	**Site ID:** Sunshine	**ZipCode:** 33141
Address: 337-71st		**City:** Miami
Name: PW Global Services, Inc.	**Hrs/Min:** 2.05	**Window:**
State: Florida	**Distance:** 54	**Toll:** $0.00
Terminal: Porteverglades	**Phone:** 305-868-5353	**Layout:**

Print All

Reg 9042 (95%)	**Prem** 9042 (95%)	**Lsd** 9042 (95%)	Tank 7
Tank 2	Tank 4	Tank 6	Tank 8

Suggested Route: I-95 South to, (Exit 7) NW 79th St. East (Becomes NW 71st St) to, Station on Left. Go a block past station to go around block. Enter Station West Side on Abbot Ave. Enter station with wide turn.

Alternate Route: I-95 South to, (Exit 7) NW 79th St. East (5 miles) to, Indian Creek Dr (light) left (go 300 Ft) to, (1st Right) 72nd st right (east 1000ft) to, Abbot Ave (One way road) right 100 ft to, staion on left. prepare for wide left into station.

Special Instructions: Need to take 2 lanes to enter station.
Motiva:Sunshine Gasoline #438652
Verify location there are other stations located on 79th St.

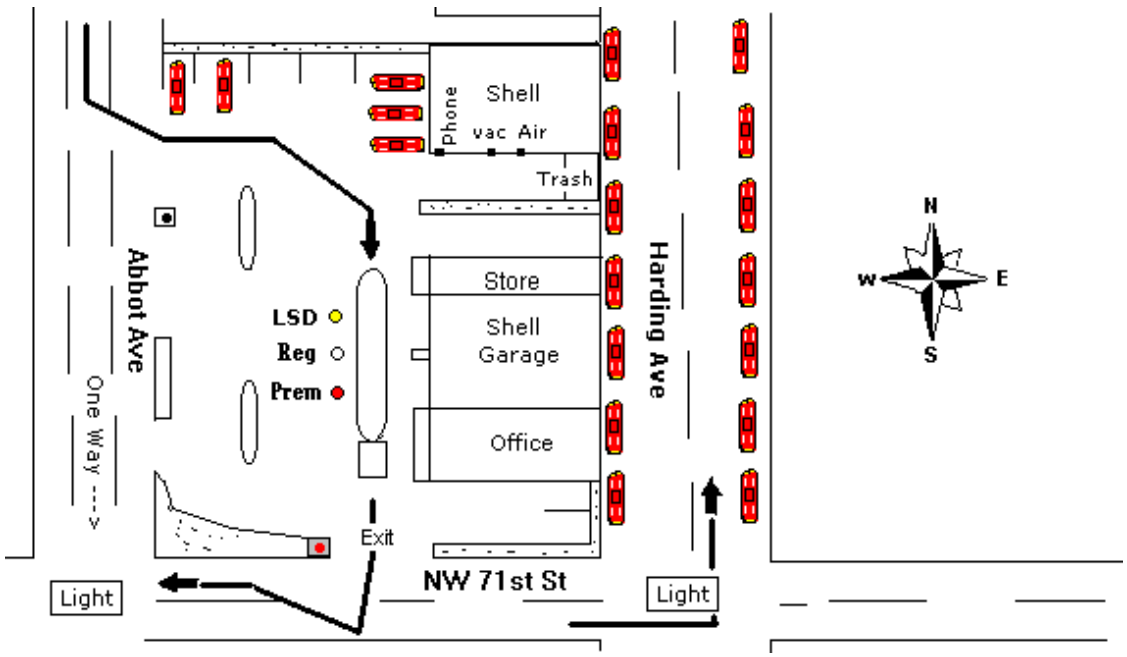


Image Last updated : 9/26/2012 8:44:37 AM

July 6, 2016

City of Miami Beach
Planning Department
1700 Convention Center Drive
Miami Beach, FL 33139

Re: Existing Canopy Clearance
Planning Board
(A Conditional Use Permit)
PW Auto Services
337 71st Street
Miami Beach, FL 33141

Dear Mr. Falconi,

The proposed project at the above referenced gasoline station does not alter existing path of the Polar Tanker Trailer that delivers fuel. The tanker trailer has been delivering fuel using this same path for many years and has never had a conflict with the existing gasoline dispenser canopy clearance.

Since the path or gasoline dispenser canopies have not been altered in any way, there will not be any conflicts with either the clearance or location of the existing gasoline dispenser canopies.

Please feel free to contact me if you have any questions.

Sincerely yours,

Orlando Alonso Jr., R.A.

OA
ARCHITECTURE
AA 26001181

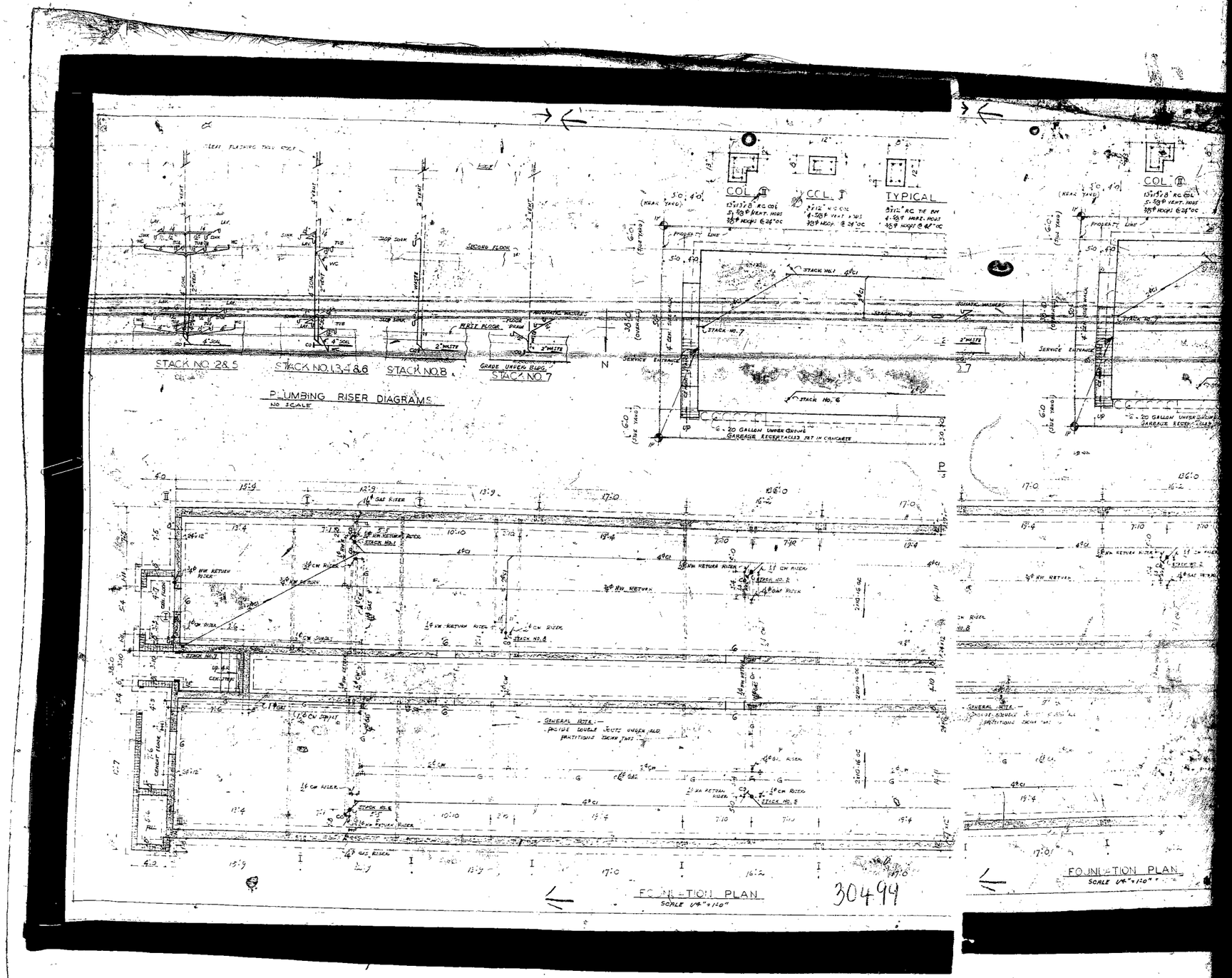
1235 Coral Way

Suite 101

Miami, FL 33145

tel. 305. 595. 3095

fax. 305.858.2269



COL. II

COL. I

TYPICAL TIE BEAM

PROPERTY LINE

4" CONC. SIDEWALK

CRUSHED STONE DRAINAGE BED

STACK NO. 1

STACK NO. 2

STACK NO. 3

STACK NO. 4

STACK NO. 5

STACK NO. 6

STACK NO. 7

STACK NO. 8

4" CONC. SIDE WALK

12:0 GRASS PLOT

TO SEWER

SERVICE ENTRANCE

G - 20 GALLON UNDER GROUND GARBAGE RECEPTACLES SET IN CONCRETE

PLOT PLAN

SCALE 1/8" = 1'0"

LEGAL DESCRIPTION :-
LOT 5 (50' x 160')
BLOCK 52 A
LINCOLN SUBDIVISION DIST. 2

1611 PENNSYLVANIA AVE. MIAMI BEACH, FLA.

136'0

FOUNDATION PLAN

SCALE 1/8" = 1'0"

GENERAL NOTE
ALL INTERIOR DOUBLE WALL PARTITIONS UNLESS OTHERWISE NOTED

GAS METER (MASTER) (CHECK SIZE OF METER)

30499

3/15/49

4 UNIT CBS APT. BLDG.
DUBZA REALTY CO.
MR. CHARLES REGL - AGENT
MIAMI BEACH FLORIDA

HAROLD MCNEIL
ARCHITECT
MIAMI FLORIDA

CONTR. NO. 510R
SHEET NO. 1-F-1

DIAGRAMATIC OF OIL DISPOSAL

30496

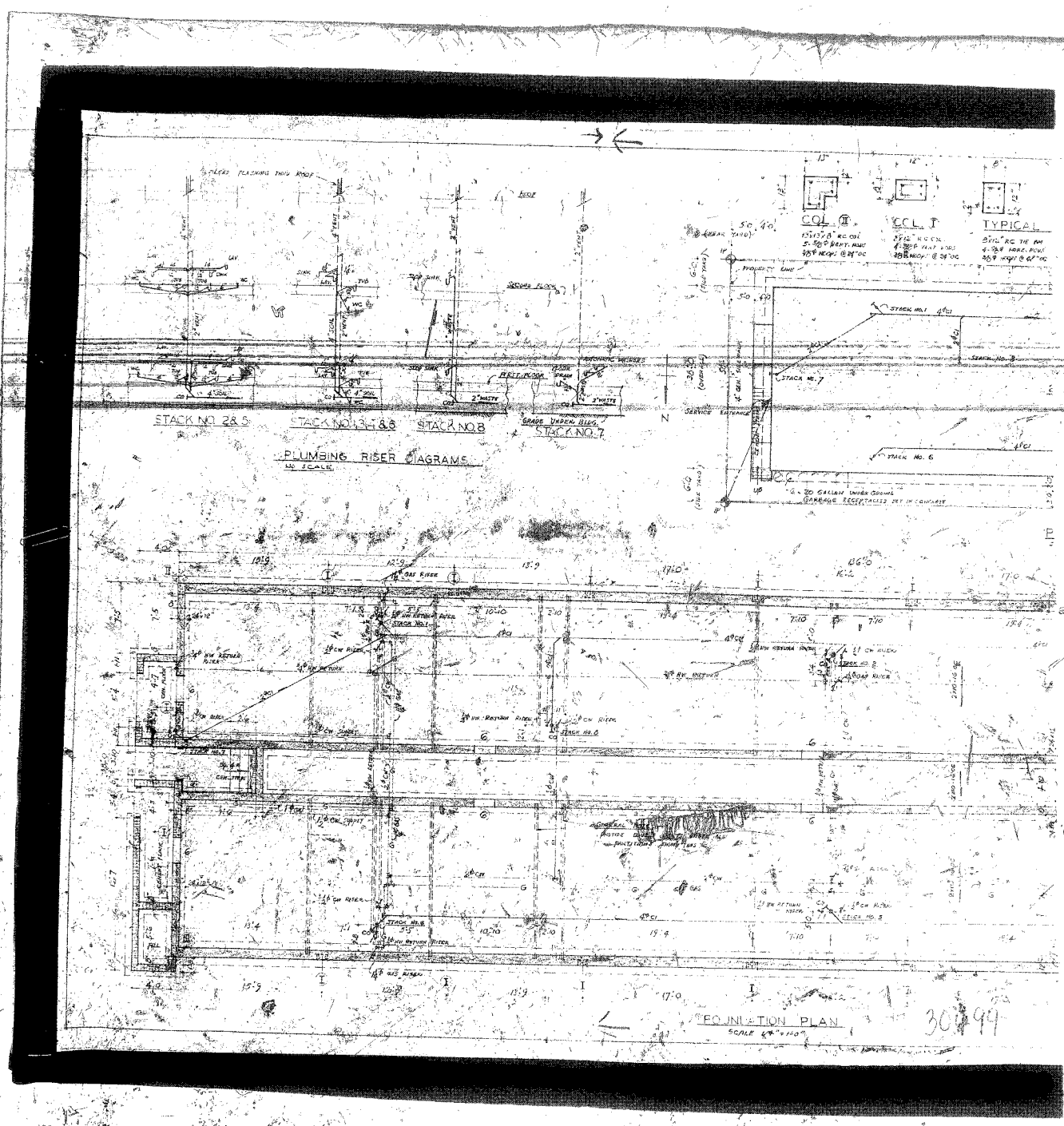
THE PURE OIL CO.
ENGINEERING DEPT. CHICAGO, ILL.

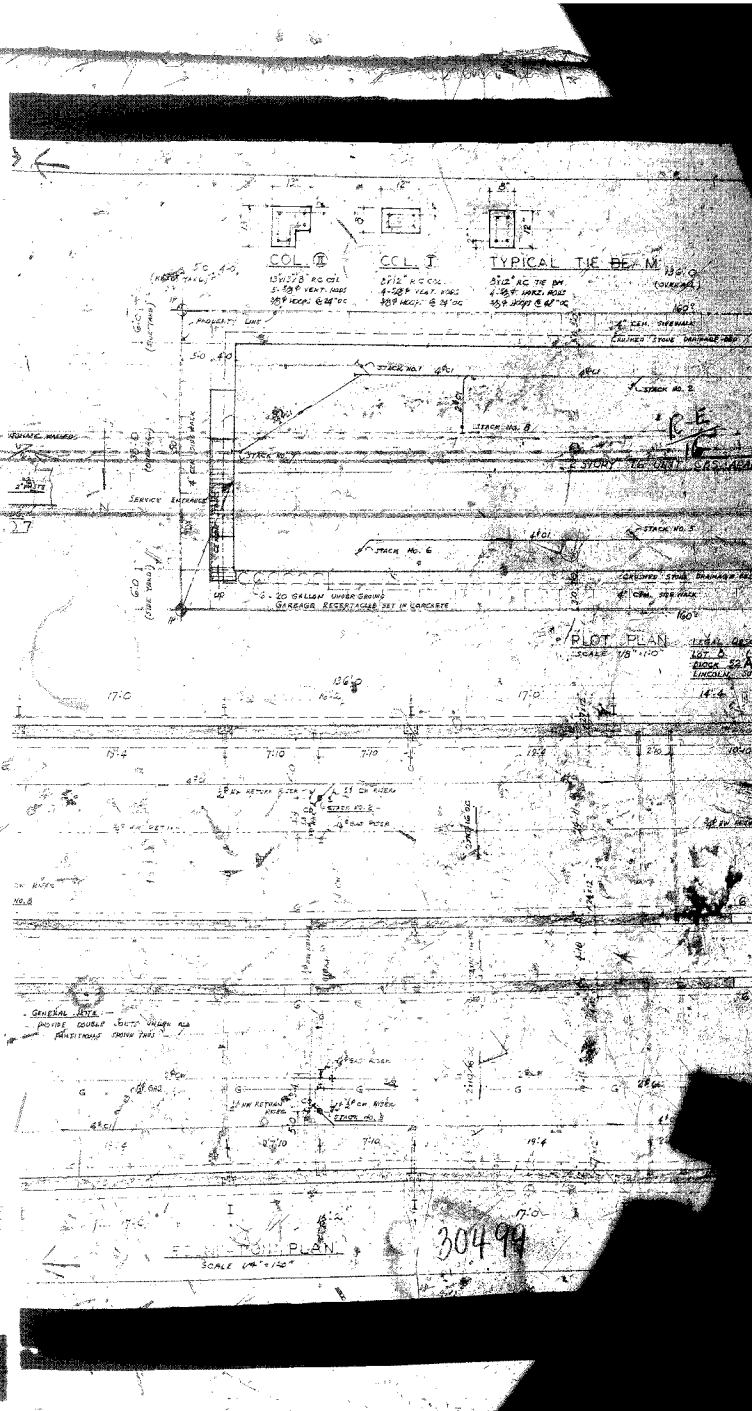
OIL & GAS LEASE DIVISION

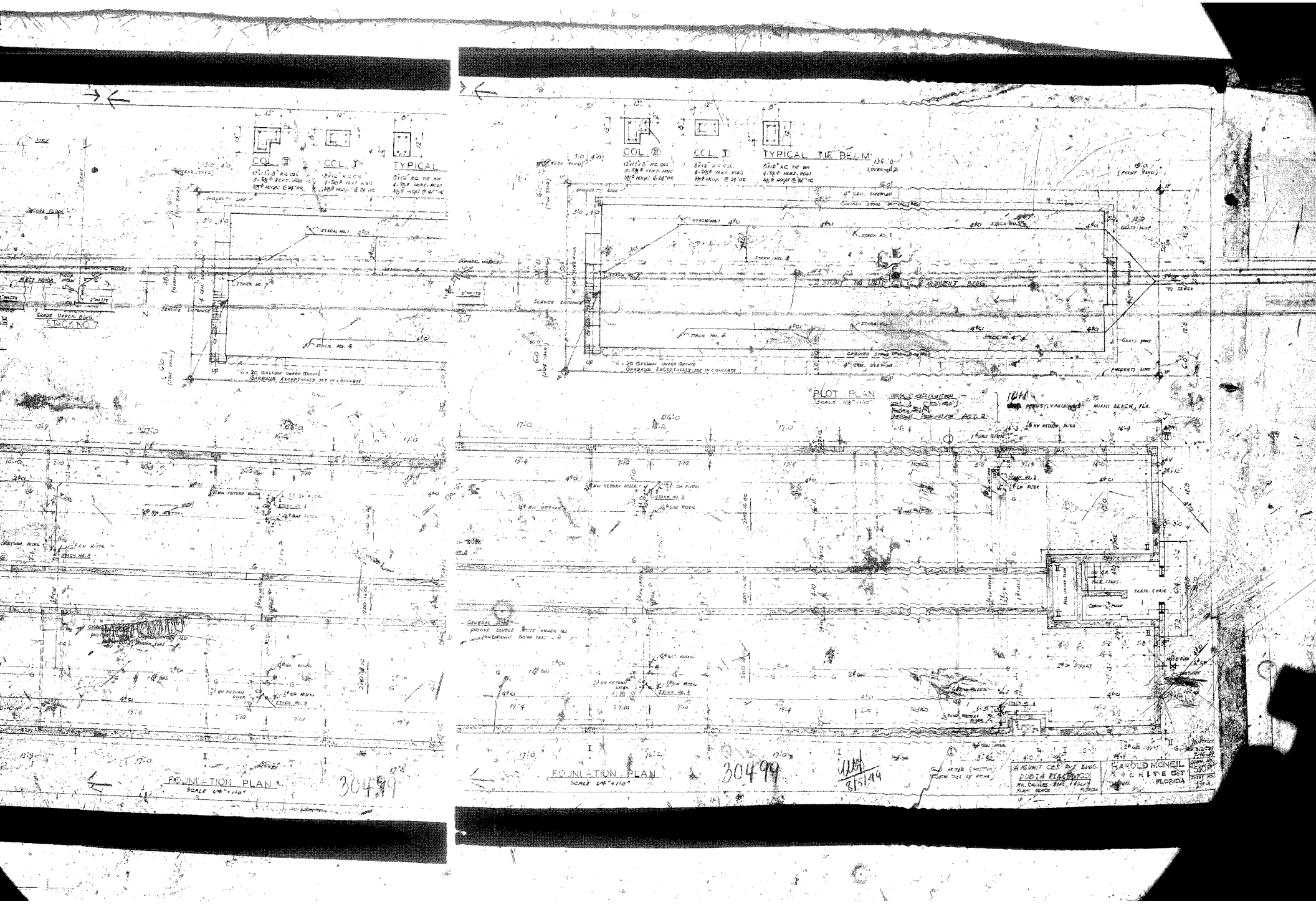
M. W. II SPECIAL PLA

SCALE: 1:1=1'
DATE:
DRAWN BY:
CHECKED BY:
APPROVED BY:

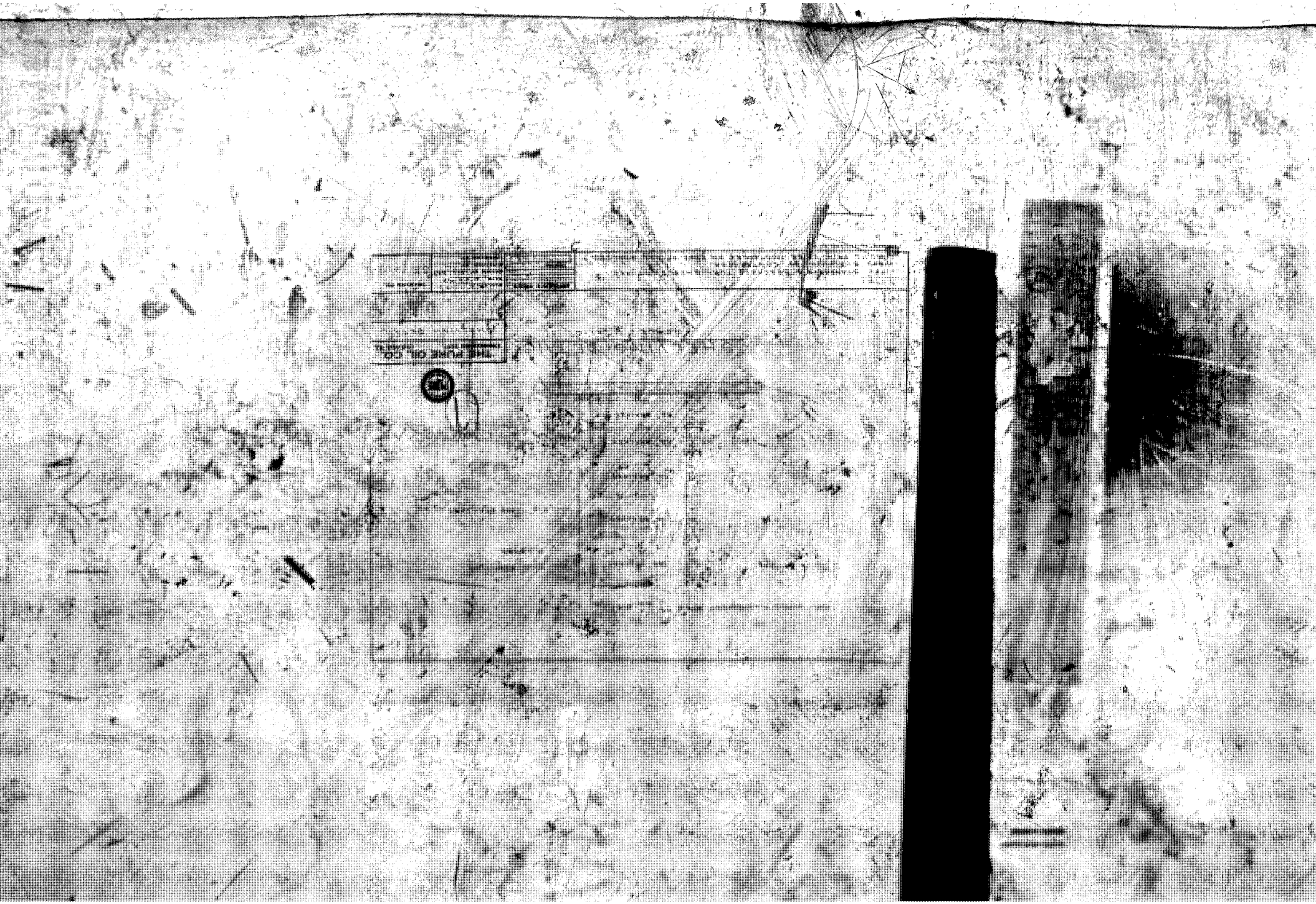
DRAWING NO.

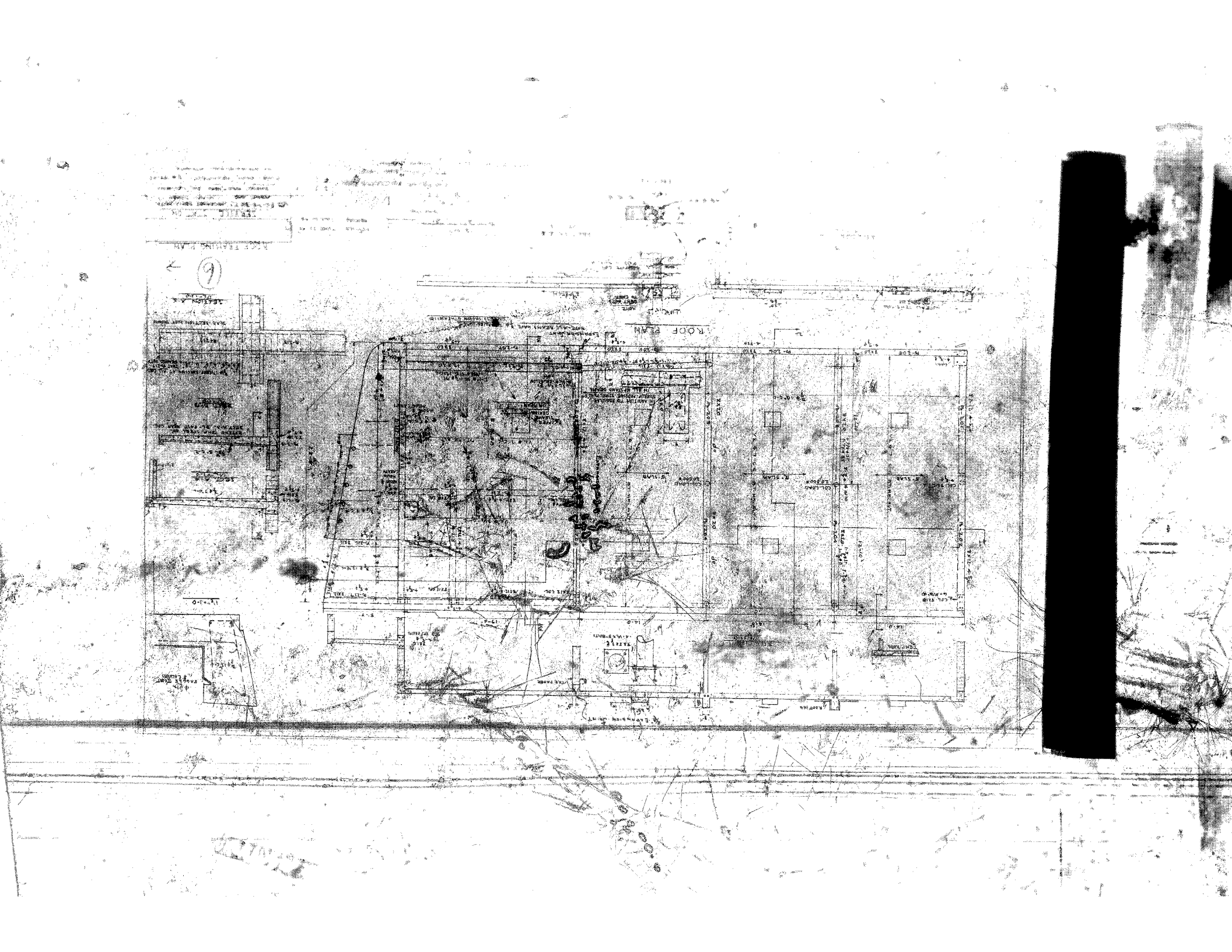

STACK NO. 2 & 5
STACK NO. 3, 4 & 8
STACK NO. 8
GRADE UNDER BLDG.
STACK NO. 7
PLUMBING RISER DIAGRAMS
FOUNDATION PLAN
SCALE 1/4"=1'-0"
COL. II
COL. I
TYPICAL
STACK NO. 1
STACK NO. 2
STACK NO. 3
STACK NO. 4
STACK NO. 5
STACK NO. 6
STACK NO. 7
STACK NO. 8
2 - 20 GALLON UNDER GROUND GARAGE RECEPTACLES SET IN GARAGE
PROPERTY LINE
SERVICE ENTRANCE
30499

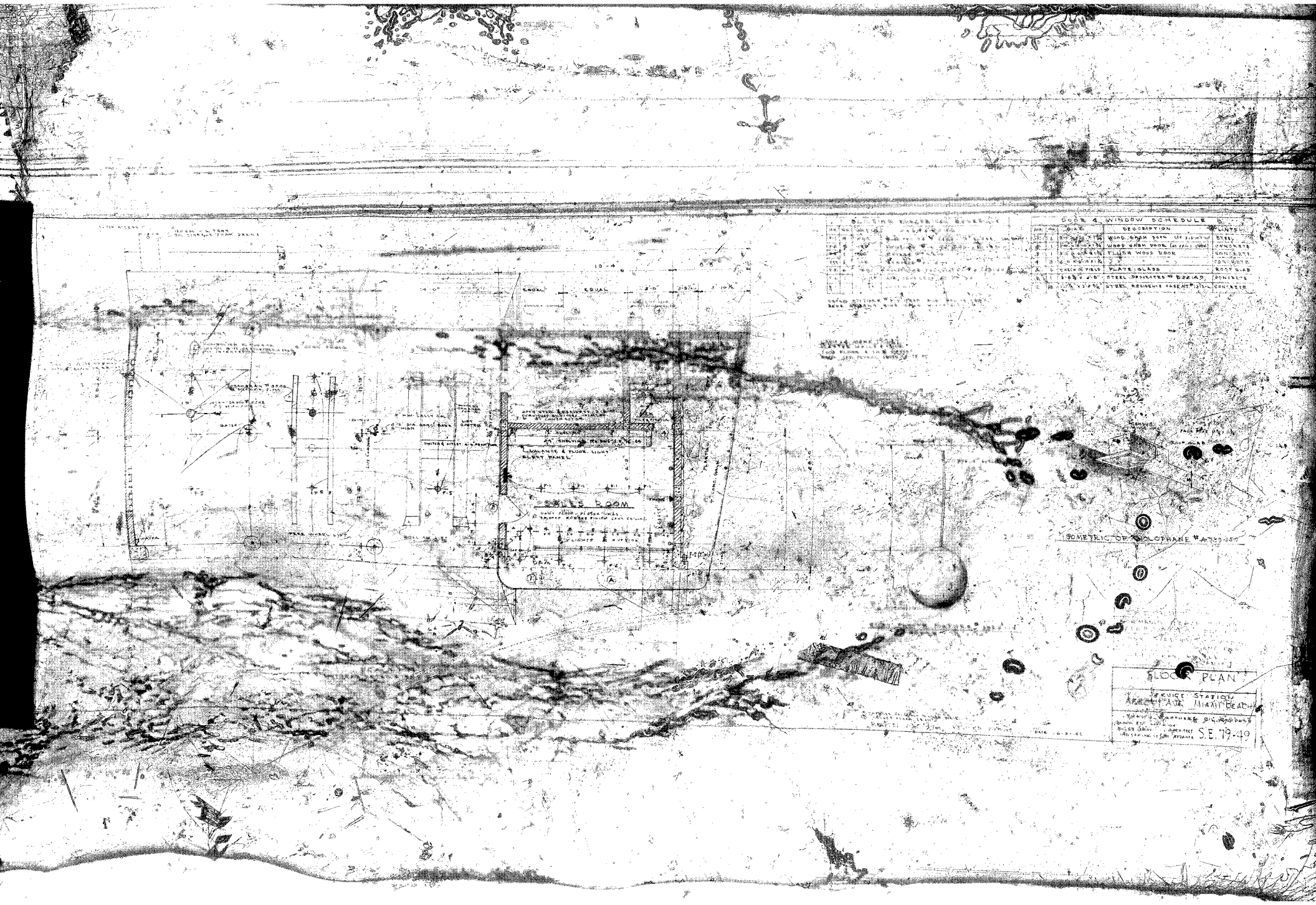

COL. II
COL. I
TYPICAL TIE BEAM
PLOT PLAN
SCALE 1/8"=1'-0"
2 STORY TO BE BUILT GARAGE
2 - 20 GALLON UNDER GROUND GARAGE RECEPTACLES SET IN GARAGE
PROPERTY LINE
SERVICE ENTRANCE
STACK NO. 1
STACK NO. 2
STACK NO. 3
STACK NO. 4
STACK NO. 5
STACK NO. 6
STACK NO. 7
STACK NO. 8
FOUNDATION PLAN
SCALE 1/4"=1'-0"
30499

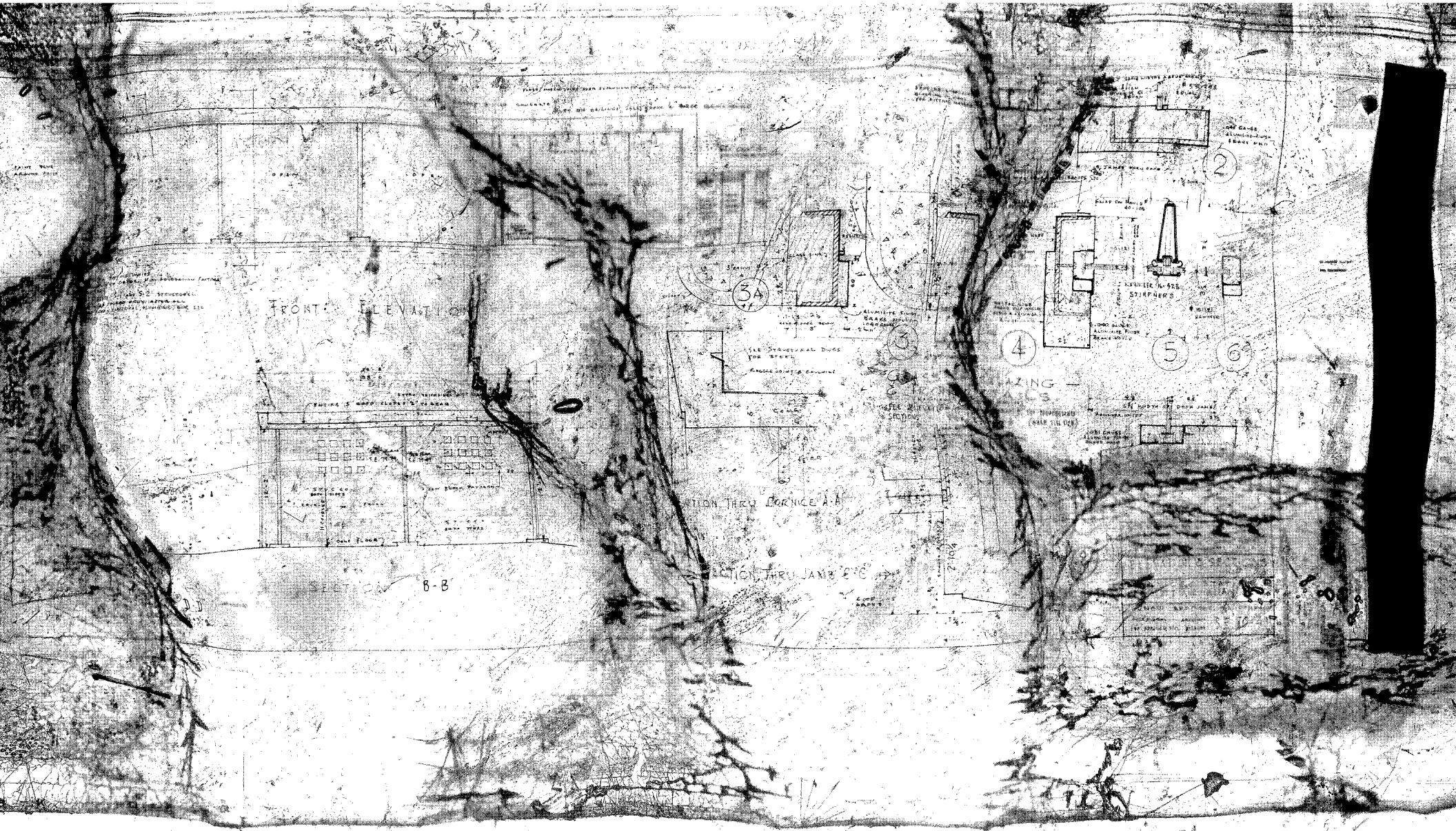

COL. II
COL. I
TYPICAL TIE BEAM
PLOT PLAN
SCALE 1/8"=1'0"
FOUNDATION PLAN
SCALE 1/4"=1'0"
FOUNDATION PLAN
SCALE 1/4"=1'0"
STACK NO. 1
STACK NO. 2
STACK NO. 3
STACK NO. 4
STACK NO. 5
STACK NO. 6
STACK NO. 7
PROPERTY LINE
SERVICE ENTRANCE
GRADE UPPER SLAB
20 GALLON UNDER GROUND GARBAGE RECEPTACLES SET IN CONCRETE
4" CONC. SIDEWALK
GRASS MAT
TO SEWER
PENNSYLVANIA AVE.
MIAMI BEACH, FLA.
HAROLD MCNEIL ARCHITECT
FLORIDA
30499

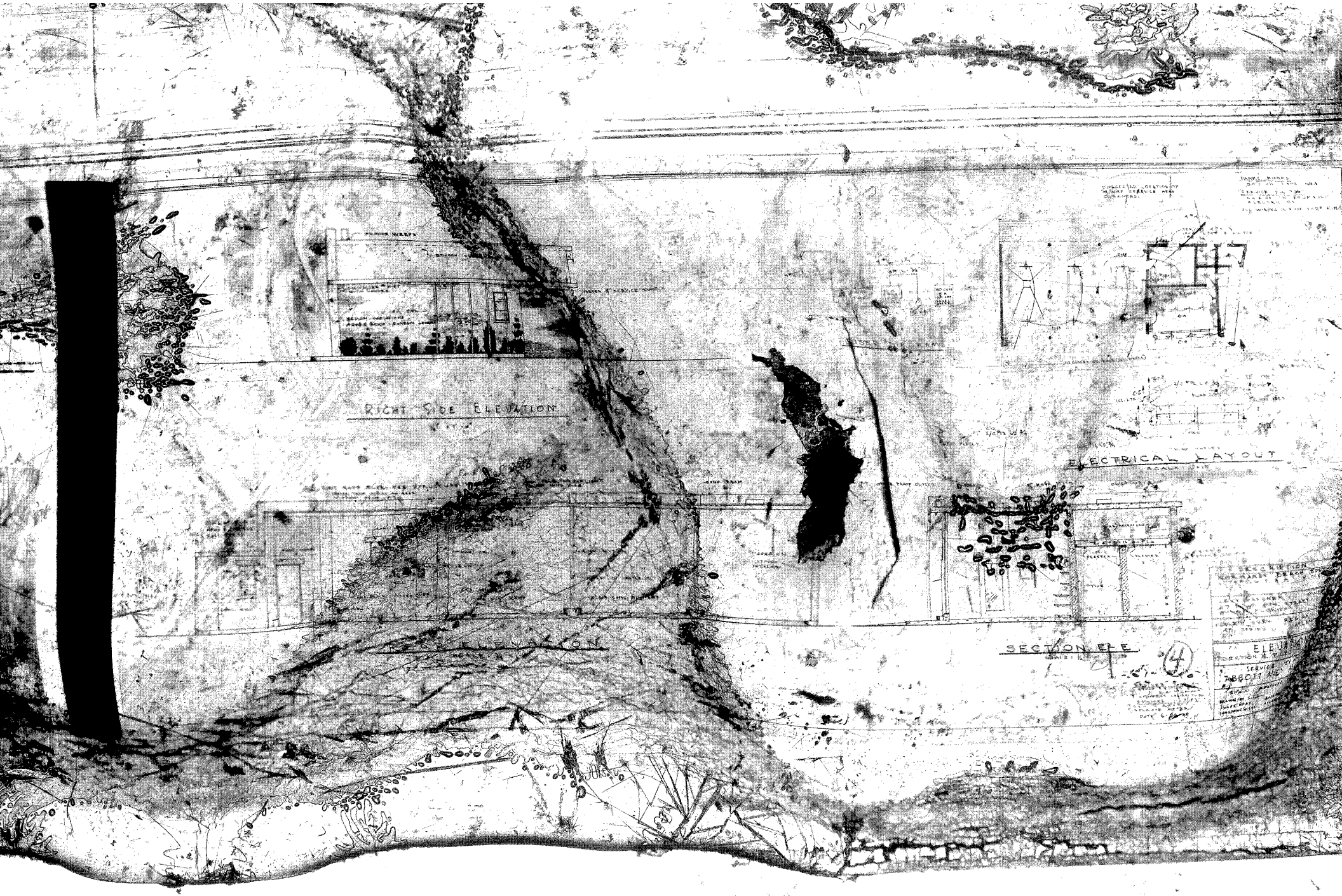
[redacted]

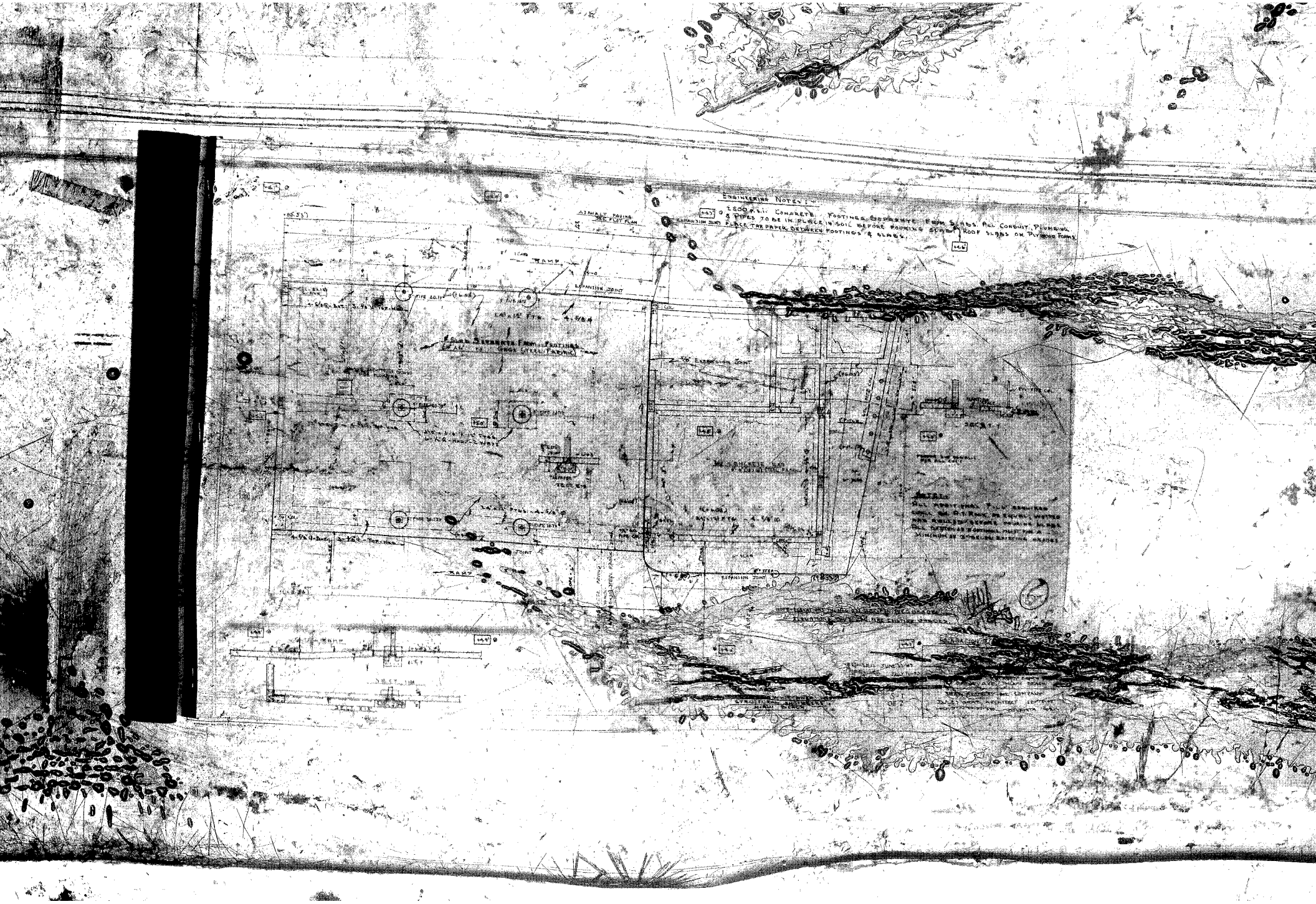

THE PURE OIL CO.




DOOR & WINDOW SCHEDULE
DESCRIPTION
WOOD GRAIN DOOR
WOOD GRAIN DOOR
FLUSH WOOD DOOR
PLATE GLASS
STEEL DOUBLE DOORS
STEEL RESIDENCE CASEMENT
SALES ROOM
ISOMETRIC OF SOLOFRANE
FLOOR PLAN
SE 79-49


FRONT ELEVATION
B-B
SECTION THRU CORNICE A-A
SECTION THRU JAMB C-C
STIFFENERS
2
3
3A
4
5
6


RIGHT SIDE ELEVATION
ELECTRICAL LAYOUT
SECTION E-E
4


ENGINEERING NOTES:
2500 P.S.I. CONCRETE. FOOTINGS SEPARATE FROM SLABS. ALL CONDUIT, PLUMBING
& PIPES TO BE IN PLACE IN SOIL BEFORE POURING SLABS. ROOF SLABS ON PLYWOOD FORMS.
EXPANSION JOINT PAPER BETWEEN FOOTINGS & SLABS.
RAMP
EXPANSION JOINT
NOTES:
ALL CONCRETE, F'c = 3000 PSI MINIMUM
SHEET 1 OF 2

MADISON, INC.
Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207
Phone 483-4401

ENGINEER

FORM 501

FOR SHELL OIL COMANY

DESCRIPTION SUBURBAN CONVERSION (SERIES 5)

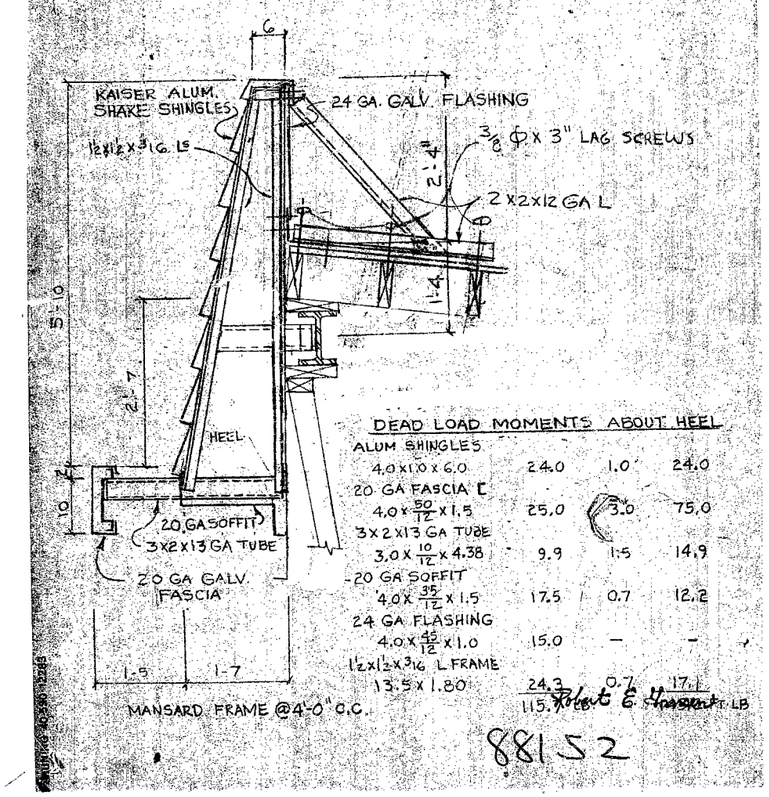
JOB NO.

SHT 1A OF 5

DATE AUG. 12, 1971

DES. BY

CHKD. BY



DEAD LOAD MOMENTS ABOUT HEEL

ALUM SHINGLES			
4.0 x 1.0 x 6.0	24.0	1.0	24.0
20 GA FASCIA [			
$4.0 \times \frac{50}{12} \times 1.5$	25.0	3.0	75.0
3 X 2 X 13 GA TUBE			
$3.0 \times \frac{10}{12} \times 4.38$	9.9	1.5	14.9
20 GA SOFFIT			
$4.0 \times \frac{35}{12} \times 1.5$	17.5	0.7	12.2
24 GA FLASHING			
$4.0 \times \frac{55}{12} \times 1.0$	15.0	—	—
1 1/2 x 1 1/2 x 3/16 L FRAME			
13.5 x 1.80	24.3	0.7	17.1
115.			FT LB

88152

88152-

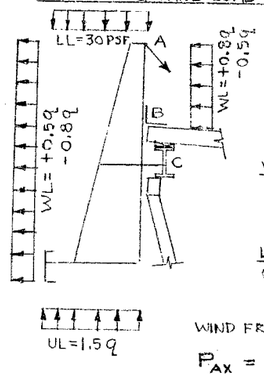
12:1

5FBC

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO.
		SHT 2A OF 5
		DATE AUG. 15, 1971
FORM 501	FOR SHELL OIL COMPANY	DES. BY
	DESCRIPTION SUBURBAN CONVERSION (SERIES S)	CHKD BY

LIVE LOAD & WIND LOAD MOMENTS

$q = 33$ LB/FT.^{2}



NEGLECT THRUST AT POINT C.

WIND FROM RIGHT - MOM. ABOUT POINT B.

$(WL+DL)M = 4.0(0.8\times33)(2.33)(1.16)$
$-4.0(0.5\times33)(6.83)(1.09) + 143$
$-\frac{1}{2}(4.0)(30)(3.0)^2$
$= 285 - 430 + 143 - 890 = \underline{-952}$ FT.LB

WIND FROM LEFT - MOM. ABOUT POINT B.

$(WL+DL)M = 4.0(0.5\times33)(2.33)(1.16)$
$-4.0(0.8\times33)(6.83)(1.09) - 143 + 890$
$= 179 - 785 - 143 + 890 = \underline{131}$ FT.LB

LIVE LOAD AND DEAD LOAD

$(LL+DL)M = \frac{1}{2}(4.0)(30)(3.0)^2 + 143$
$= 540 + 143 = \underline{683}$ FT.LB

WIND FROM RIGHT CONTROLS - M = 952 FT.LB

$P_{AX} = \frac{952}{2.33} = 408$ LB

$V_{BX} = 408 + 4.0(0.8\times33)(2.33) + 4.0(0.5\times33)(5.83)$
$= 408 + 246 + 384 = \underline{1038}$ LB

@ POINT A: USE (2) # 14 S.M. SCREWS TO ANGLE FRAME
@ POINT B: USE (2) # 14 S.M. SCREWS TO ANGLE FRAME
AND $\frac{3}{8}$" ϕ x 3" LAG SCREWS @ 16" O.C.
CONNECTIONS TO JOIST

DRURING 404-30J 12283

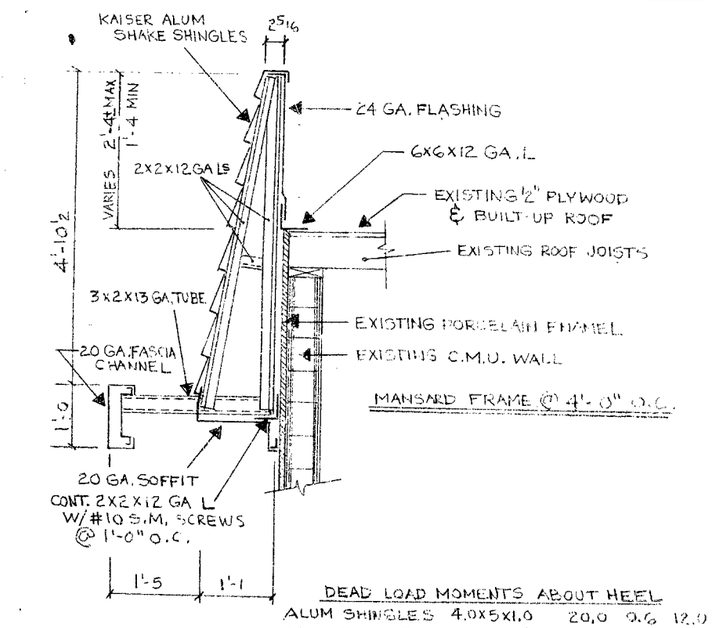
Robert E. Hansen

88152

88152-01 12:1

GENERAL NOTES AND SPECIFICATIONS

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO. SHT 3A OF 5 DATE AUG. 14, 1971
FORM 501	FOR SHELL OIL COMPANY DESCRIPTION SUBURBAN CONV. (SERIES S)	DES. BY CHKD. BY



DEAD LOAD MOMENTS ABOUT HEEL

ALUM SHINGLES	4.0X5X1.0	20.0	9.6	12.0
2.0 GA FASCIA L	4.0X(42/12)X1.5	21.0	2.4	50.0
3X2X13 GA. TUBE	3.0X(10/12)X3.75	8.4	1.2	10.2
20 GA. SOFFIT	4.0X(28/12)X1.5	14.0	0.5	7.0
24 GA. FLASHING	4.0X(36/12)X1.0	12.0	Revised by Engineer	
2X2X12 GA L FRAME	10.5X(4/12)X4.38	15.3	8.6	9.2
		88.7		88.4

88152

BRUNING 40-530 12283

88152-02 12:1

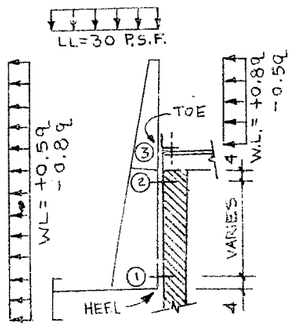
GENERAL NOTES AND SPECIFICATIONS

SFBC

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO. SHT 4A OF 5 DATE AUG. 14 1971
FORM 501	FOR SHELL OIL COMPANY DESCRIPTION SUBURBAN CONV. (SERIES S)	DEP. BY CHKD. BY

LIVE LOAD & WIND LOAD MOMENTS

$q = 33$ LB/FT.^{2}



WIND FROM RIGHT - MOM. ABOUT HEEL

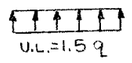
(WL+DL)M = 4.0(0.8x33)(2.5)(4.04)
+ 4.0(0.5x33)(5.87)(2.25) + 88
- ½(4.0)(1.5x33)(2.5)^2
= 1070 + 870 + 88 - 618
= 1410 FT. LB.

WIND FROM LEFT - MOM. ABOUT TOE

(WL+DL)M = 4.0(0.5x33)(2.5)(1.25)
- 4.0(0.8x33)(5.87)(0.44)
+ 88 + 618
= 206 - 273 + 530 = 463 FT.LB

LIVE LOAD AND DEAD LOAD

(LL+DL)M = ½(30)(4.0)(2.5)^2 + 88
= 375 + 88 = 463 FT.LB



WIND LOAD FROM RIGHT CONTROLS - M=1410 FT.LB

BOLT	X	X^2	MX/ΣX	
①	0.33	0.11	42	
②	1.75	3.07	305	<400 O.K.
③	2.79	7.77	354	SHEAR
		10.95		

USE: ⅜" Φ x 3" LAG SCREWS IN PLYWOOD ROOF DECK @ 1'-4" O.C.
(2) ⅜" Φ M. BOLTS W/U.S.E. Co. CODE 1106 X 1¾ EXP. SHIELD

BRUNING 40-530 12283

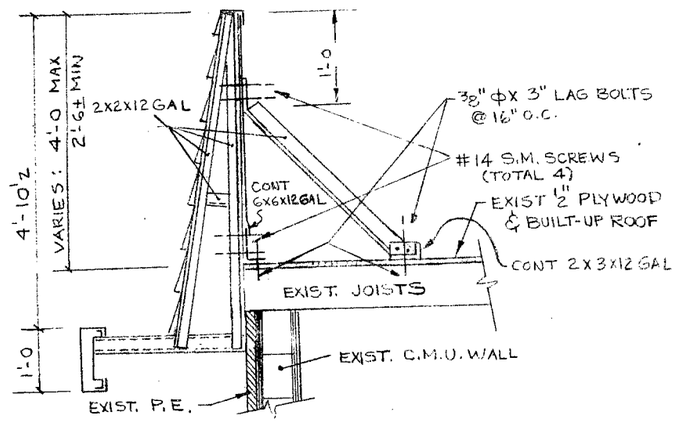
Robert E. Hansard

88152

88152-03 12:1

GENERAL NOTES AND SPECIFICATIONS

ENGINEER	MADISON, INC Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO. SHT 5A OF 5 DATE AUG. 14, 1971
FORM 501	FOR SHELL OIL COMPANY DESCRIPTION SUBURBAN CONV. (SERIES 5)	DES. BY CHKD. BY



BRUNING 40-530 12283

Robert E. Hansen
88152

88152-04 12:1

GENERAL NOTES AND SPECIFICATIONS

All materials and workmanship shall conform to the requirements of the South Florida Building Code, latest edition.

STRUCTURAL STEEL

1. All structural steel to conform to ASTM A36-62T per U.B.C. Sect. No. 2701.
2. Pipe- ASTM A53-62T, Grade "B", or API - 5L Gr. "B", or A-252-63T Gr. 2.
3. Light gage steel - Grade "C", Fb=20000 psi ASTM A245.
4. All welding to be applied by qualified welders using electric arc process.

PROTECTION OF METAL

Structural steel shall be machine wire brushed to remove loose mill scale, dirt, and other foreign matter, then degreased and shop painted with Sander, s red oxide primer #99061. Beams are enclosed from weather by galvanized sheet metal covers. Exposed structural steel such as columns to be field painted in addition to the initial shop coat with coating compatible with the shop coat. Exposed bolts are cadmium plated.

STRUCTURAL SHEETS

Roof deck shall be 18 Ga. GALVANIZED WITH, 3 high interlocking ribs 16" o.c. attached to supporting members with two sheet metal screws at each end.

CONCRETE

1. Minimum ultimate compressive strength at 28 days shall be 2000 psi. Machinemix 1:2 1/2 : 3 1/2 with maximum of 7 1/2 gallons water per sack cement.
2. Reinforcing steel to be intermediate grade "C" deformed bars as per ASTM A15-62T and A305-56T. Minimum lap shall be 30 diameters.

MASONRY

1. Concrete masonry units shall be Grade "A", ASTM C90-59, having 1 1/4" minimum shell thickness.
2. Mortar (or grout) shall consist of 1 part cement, 3 parts sand and 1/4 part lime.
3. Reinforcing steel as above except minimum lap shall be 40 diameters.

FOUNDATION

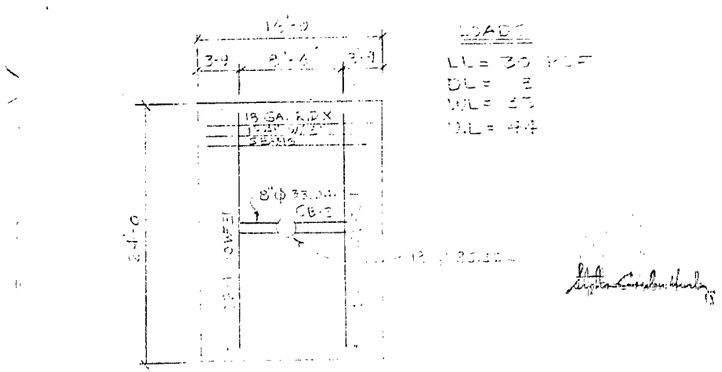
1. Soil type: Sugar-sand
2. Design allowable: 1000 psf maximum at 1 foot depth, 20% increase per foot of additional depth with maximum of 4000 # per sq.ft.
3. Bottom of all load bearing footings to be a minimum of 12" below natural undisturbed ground surface.

CONTINUOUS INSPECTION shall not be required. Working stresses of masonry, and of those welds which are applied in the field, are limited to one-half the normal values specified by code.

88152

88152-05 12:1

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO. SHT. 1 OF DATE
FORM 501	FOR SHELL OIL COMPANY DESCRIPTION 240' x 64' FLY CAMP.	DES. BY CHKD. BY



LOAD
LL = 30 PSF
DL = 8
WL = 25
T.L = 63

CB-1 $D = 8" \times 8" = 2$ PLF
$M = \frac{1}{2} \times 2 \times 12 \times 12 =$ FT-LB
$S_x = \frac{12 \times (10)}{F_b} =$
$F_b = \frac{(12)6}{12(+\ )} =$

CB-2 CASE I - SYMMETRICAL
$M = \frac{1}{2} \times 2 \times 2 \times 2 =$
$S_x = \frac{12 \times 2 (10)}{F_b} =$

BRUNING 40-530 12283

88152

88152-06 12:1

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	Job No.
		Sht C2 of
		Date MAY 18, 1971
FORM 501	For SHELL OIL COMPANY	Des. By
	Description 24'-2" X 16'-2" F.S. CANOPY	Chkd. By

CB2 (CONT'D.)

CASE II TORSION AND BENDING

UNBALANCED LL

$M = \frac{1}{2}(3)(24)(8)^2 + \frac{1}{2}(30)(12)(8)^2 = 2304 + 11520 = 13824$

$f_b = \frac{(13,824)(12)}{19.5} = 8.63$ KSI

$T = \frac{1}{2}(3)(16)(12)^2 = 3456$ FT-LB

$J = 2(3.14)(4.0)^3(0.375) = 151$

$f_v = \frac{34.5(12)(4.31)}{151} = 11.6$

$f = \frac{1}{2} \times 8.63 + \sqrt{(\frac{1}{2} \times 8.63)^2 + (11.6)^2} = 4.3 + 12.6 = 16.9$ KSI

USE PIPE Φ 33.041

COLUMN

$P = 3(24)(K) + 3(24)(3) = 1152 + 5760 = 6912$ LB

$M = \frac{1}{2} \times (30)(16)(12)^2 = 34560$

$f_b = \frac{34,560}{23.0} = 18.1$ KSI < 24

$KL = 2(18) = 36$ ALLOW. F (AXIAL) $= 12.2$ K

$\Sigma f/F = \frac{6.9}{12.2} + \frac{18.1}{24} = 0.056 + 0.751 = 0.807 < 1.0$

USE 12" Φ 25.232

CONNECTIONS 10WF TO 8" PIPE

UNBALANCED LL $M = \frac{1}{2} \times 30 \times 8 \times 12^2 = 17250$ FT-LB.

SHEAR FLOW = $17,250(12)/2(3.14)(4.30)^2 = 1,500$ #/IN

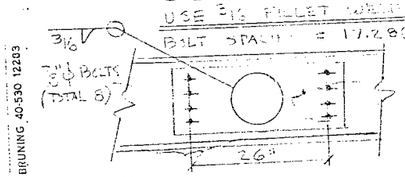
USE 3/16 FILLET WELD ALL AROUND

BOLT SPACING = $17,250(12)/4(2,000) = 2.59$" USE 2.7"

$S(12) = \frac{1}{2} \times \frac{3}{8} \times 12^2 = 162$

$M_R(12) = 22 \times 10.5 \times \frac{1}{12} = 19.3$ IK

USE $7/8" \times 3\frac{1}{2} \times 30"$ PL

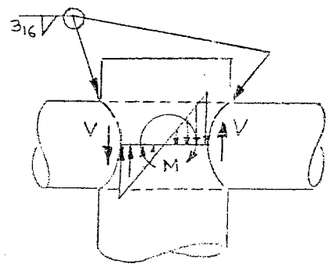


88152

88152-07 12:1

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO.
		SHT C 3 OF
		DATE MAY 18, 1971
FORM 501	FOR SHELL OIL COMPANY	DES. BY
	DESCRIPTION 24'-X16'-9" F.S. CANOPY	CHKD. BY

CONNECTIONS (CONT'D.)



8" ϕ TUBE TO 12" ϕ TUBE

ON NET SECTION OF 12" ϕ TUBE

$M = \frac{1}{2} \times 17.3 \times 12 = 104$ IN·K

M_R (NET SECTION)

$M_R \gtrsim 2(24)(\frac{1}{16} \times 0.183 \times 10^2)$

$= 150$ IN K > 104

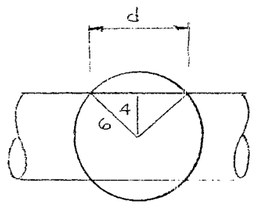
THE NET SECTION IS ADEQUATE

$V \lesssim \frac{17.3(12)}{10} = 20.8^K$

SHEAR ON WELD

$\lesssim \frac{20.7}{3.14 \times 3.62} = 1.76^{K/IN}$

USE 3/16 FILLET ALL AROUND



BRUNING 40-530 12203

88152

88152-08 12:1

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO.
		SHT C4 OF
		DATE MAR. 29, 1971
FORM 501	FOR DEAN OIL COMPANY	DES. BY JDB
	DESCRIPTION 24X16 F.S. CANOPY	CHKD. BY

MOMENT FOOTING $b = 3.0$

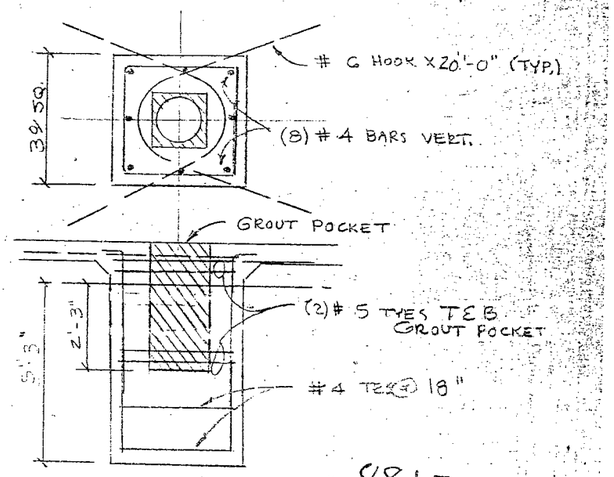
$d = \sqrt[3]{\frac{3(34.56)}{0.25(3)}} = 5.12$ FT. SAY 5'-3

$A_{sv} = \frac{34.56}{20(0.9)(2.75)} = 0.70\ \square$" USE (8) # 4 BARS EA. FACE

$C = \sqrt{\frac{3(3.14)(34.56)}{(0.5\times144)(1.0)}} = 2.15$ FT USE 27"

$A_{sl} = \frac{34.56}{20(0.9)(1.5)} = 1.28\ \square$" USE (2) # 5 TYES TE B. GROUT POCKET

REACTION @ GROUND SURFACE
= 17.5^K ± USE # 6 HOOK



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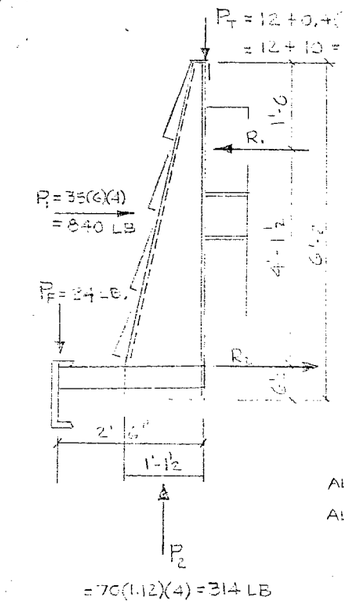
88152-09 12:1

ENGINEER	MADISON, INC. Box 131, 1037 S. Access Rd., S.W., Conyers, Ga. 30207 Phone 483-4401	JOB NO.
		SHT. OF
		DATE MAY 19, 1971
FORM 501	FOR SHELL OIL COMPANY	DES. BY
	DESCRIPTION MANSARD FACIA SUPPORT	CHKD. BY



WIND LOAD

P_1 = 35 LB/FT.²

P_2 = 70 LB/FT.²

DEAD LOAD - 4'-0" SPACING

SHINGLES & SUPPORTS
≈ 0.35 + 0.05 = 0.40 LB/FT.²

BRACKET = 2(6) = 12 LB

FASCIA = 3(2) = 6 LB/FT. (8'-0 o.c.)

P_F = 6(8) = 48 LB

$$R_2 = \frac{48(3.5) - 840(1.33) - 314(0.56)}{4.0}$$

= -360 LB ⟶ O.K

$$R_1 = \frac{48(0.5) - 840(2.54) - 314(0.56)}{4.0}$$

= -547 LB ⟵ O.K -
COMPRESSION

ALLOW SHEAR/¼" ϕ DRIVE PIN = 430#

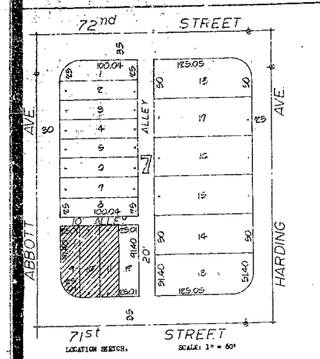
ALLOW PULL OUT LOAD/PIN = 500 #

BRUNING 40-530 1220

88152

88152.10

12:1



I HEREBY CERTIFY that the information shown hereon represents a Survey made under my direction and is true and correct to the best of my knowledge and belief.
J. B. FORD COMPANY.

C. W. LAIRD #1230
REGISTERED LAND SURVEYOR
STATE OF FLORIDA

TOPOGRAPHICAL SURVEY OF:

Lots 9, 10 and 11,
Block 7,
NORMANDY BEACH SOUTH,
According to the Plat thereof as recorded in Plat Book 23, at Page 34 of the Public Records of Dade County, Florida.

Contains: 6,857.7± Square feet or 0.157 Acre.

(8.0) Indicates U.S.E.D. (Bay) Datum Elevation.

City of Miami Beach.

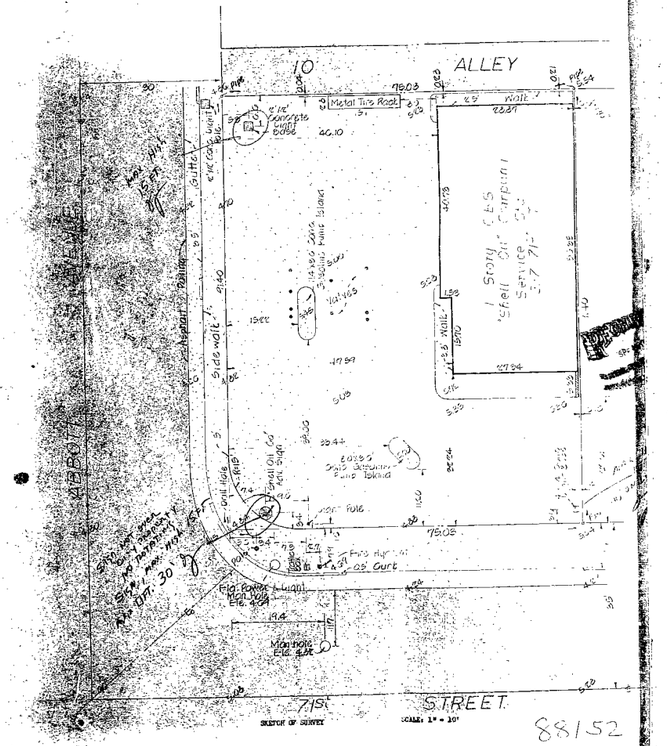
Zoning: R-3
Building Set Backs: Build to all Property Lines.
Pump Island Set Back: 15 feet from Prop. Lines.
Pump Island Canopy: Extent to Pump Islands.

Verify all Zoning and Set Backs before proceeding with Plans or construction, with Zoning Officials. We accept no responsibility.

J. B. FORD CO.

CITY OF MIAMI BEACH
APPROVED
DATE 9-18-72
Signs PERD SEPARATE
Comm 176. 29

J. B. FORD CO.
C. W. LAIRD, P.E.S.
174 W. Flagler Street
Miami 35, Florida
Phone: 642-2836, 642-2711

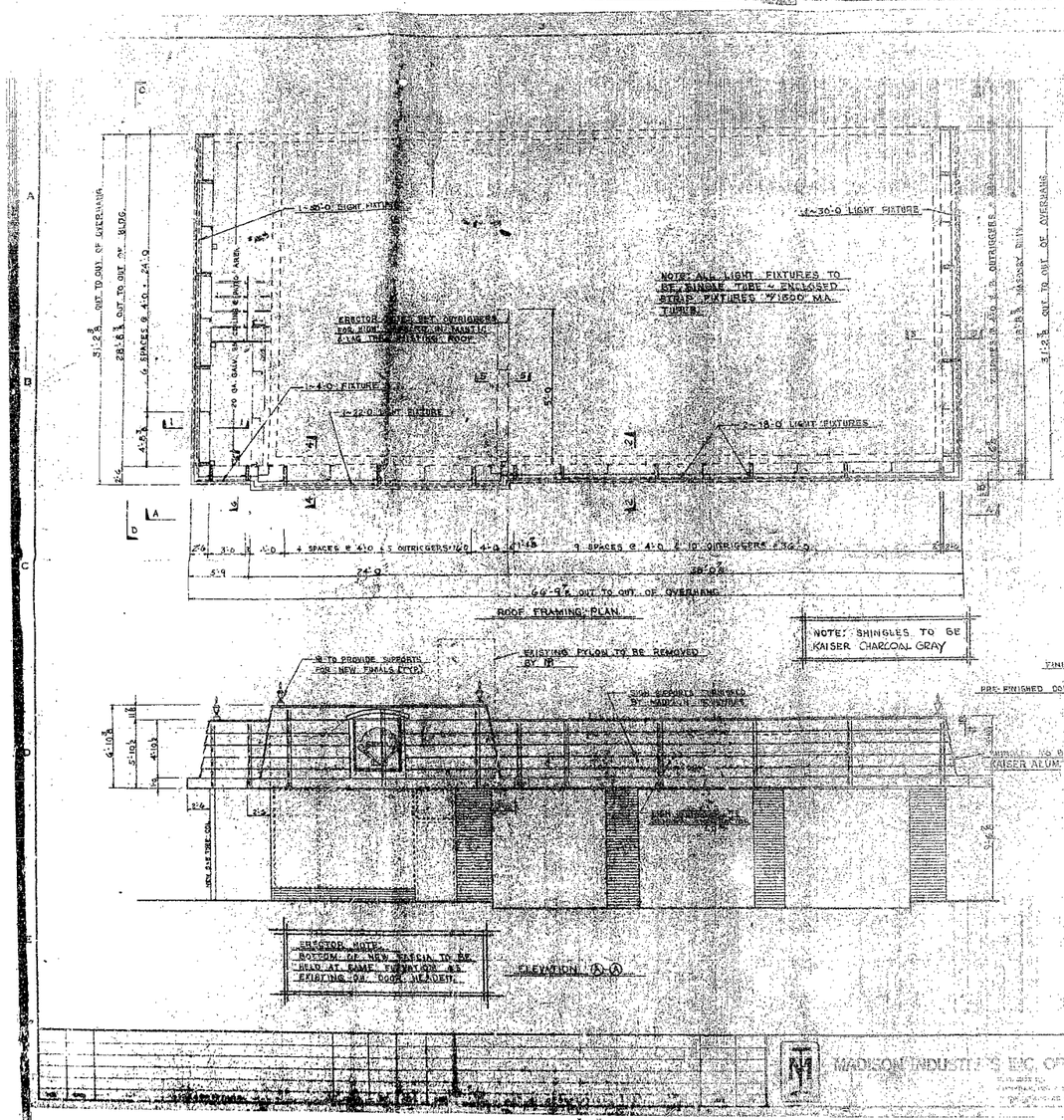


88152

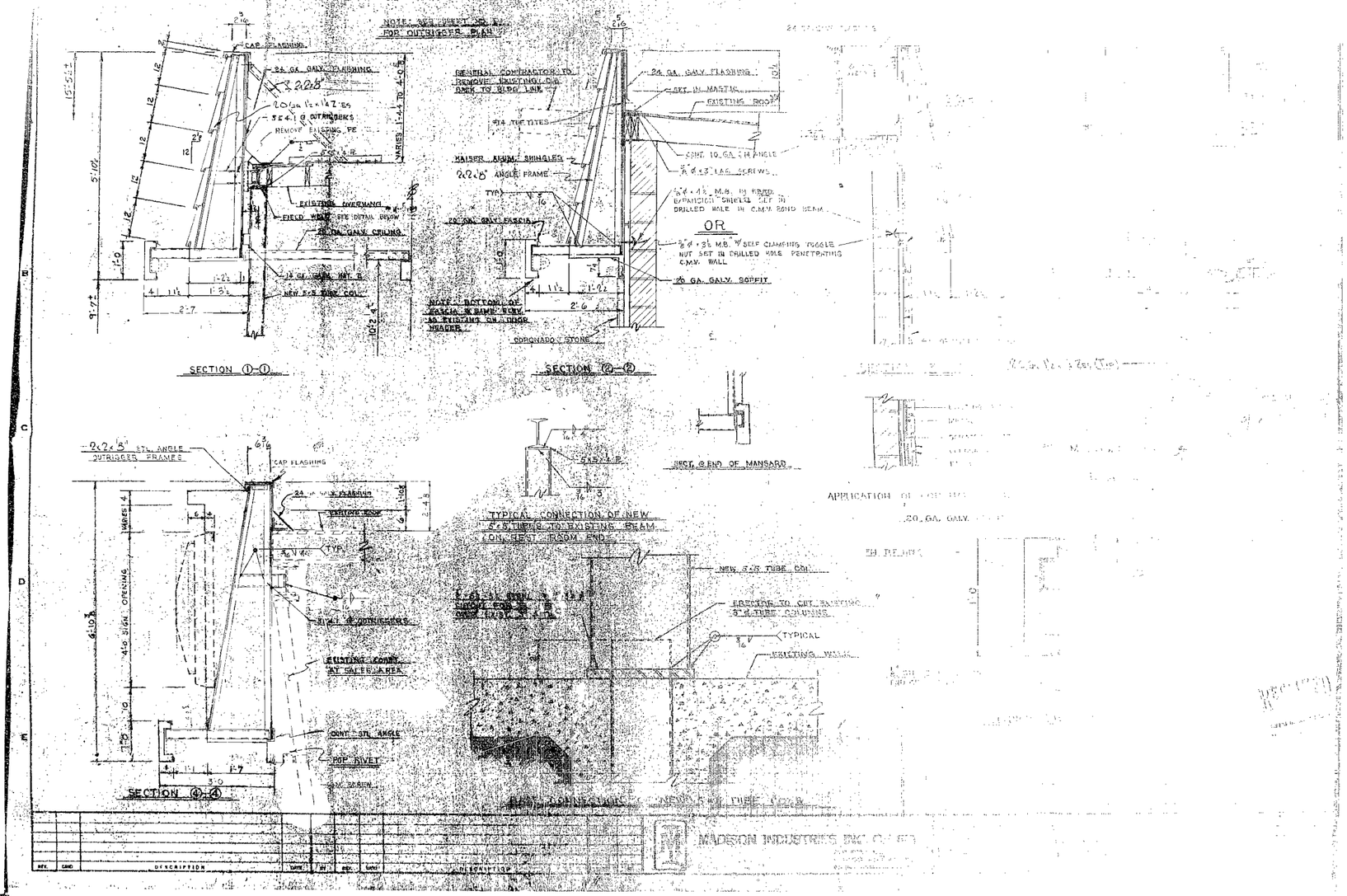
FOR: SHELL OIL COMPANY. DATE: June 13, 1969

ORDER NO: 35609 F.B: L87-46 & 47 S-35609

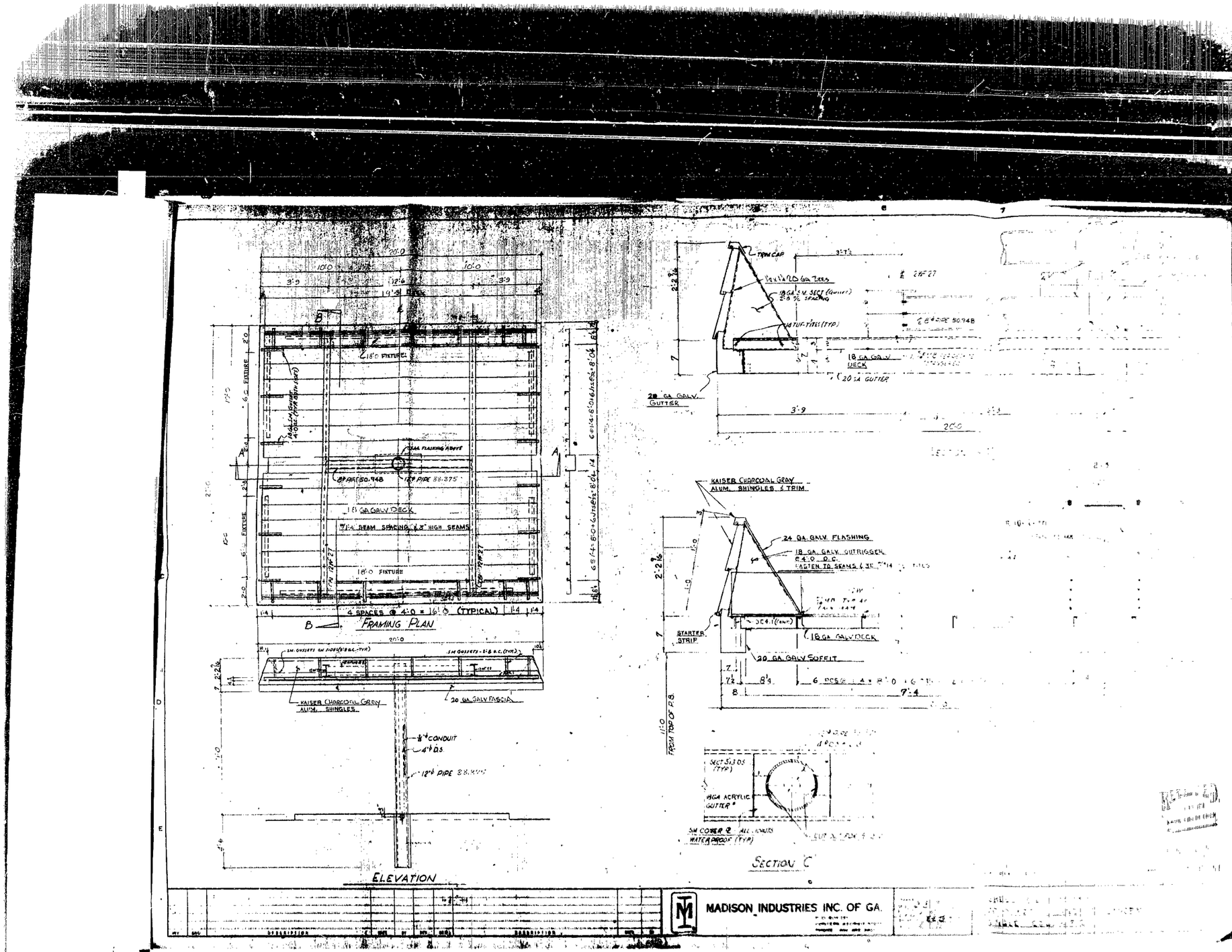
88152-11 22:1


1-30'-0 LIGHT FIXTURE
NOTE: ALL LIGHT FIXTURES TO BE BRONZE FINISH
2-18'-0 LIGHT FIXTURES
1-40'-0 LIGHT FIXTURE
1-4'-0 FIXTURE
2-22'-0 LIGHT FIXTURE
ROOF FRAMING PLAN
NOTE: SHINGLES TO BE KAISER CHARCOAL GRAY
EXISTING PYLON TO BE REMOVED
TO PROVIDE SUPPORTS FOR NEW FINIALS (TYP.)
FINIALS
PRE-FINISHED DORMER
SHINGLES TO BE KAISER ALUM.
ELEVATION A-A
EROSION NOTE:
BOTTOM OF NEW FASCIA TO BE HELD AT SAME ELEVATION AS EXISTING OVERHEAD DOOR HEADER

88152-11

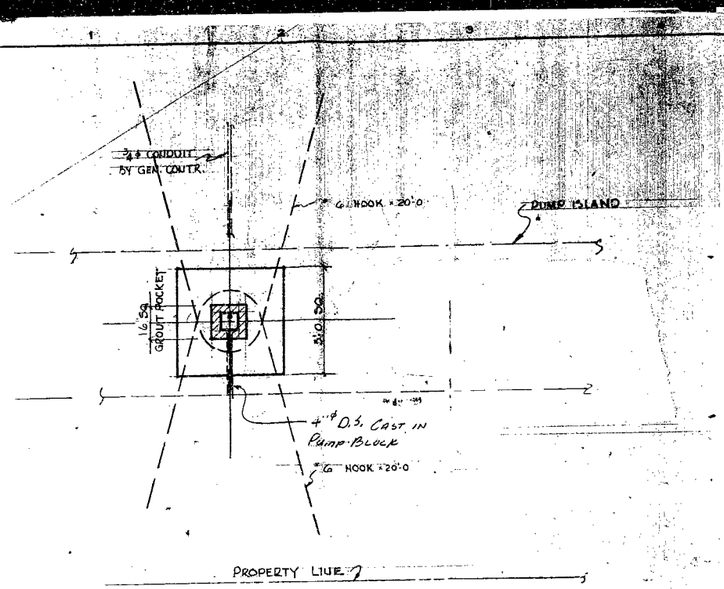

CAP FLASHING
24 GA. GALV. FLASHING
2x2x3/16 OUTRIGGERS
REMOVE EXISTING FE
EXISTING OVERHANG
FIELD WELD SEE DETAIL BELOW
20 GA. GALV. CEILING
NEW 6"x6" TUBE COL.
NOTE: SEE SHEET S-1 FOR OUTRIGGER PLAN
GENERAL CONTRACTOR TO REMOVE EXISTING ROOF DOWN TO WOOD DECK
#14 TEK TITES
KAISER ALUM. SHINGLES
2x2x3/16 ANGLE FRAME
20 GA. GALV. FASCIA
NOTE: BOTTOM OF FASCIA & BAND BOARD AS EXISTING ON THREE SIDES
CORONADO STONE
24 GA. GALV. FLASHING
SET IN MASTIC
EXISTING ROOF
CONT. 10 GA. L.H. ANGLE
5/16"ø x 3" LAG. SCREWS
3/4"ø x 4½ M.B. IN EPOXY EXPANSION SHIELD SET IN DRILLED HOLE IN C.M.U. BOND BEAM
OR
3/8"ø x 3½ M.B. W/SELF CLAMPING TOGGLE NUT SET IN DRILLED HOLE PENETRATING C.M.U. WALL
26 GA. GALV. SOFFIT
SECTION ①-①
SECTION ②-②
2x2x3/16 STL. ANGLE OUTRIGGER FRAMES
CAP FLASHING
24 GA. FLASHING
EXISTING ROOF
TYP.
SLIP-ON OUTRIGGERS
EXISTING CONST. AT GABLE AREA
CONT. STL. ANGLE
POP RIVET
24 GA. FASCIA
SECTION ④-④
TYPICAL CONNECTION OF NEW 6"x6" TUBE COL. TO EXISTING BEAM (ON WEST ROOM END)
SECT. @ END OF MANSARD
NEW 6"x6" TUBE COL.
ERECTOR TO CUT EXISTING 6"x6" TUBE COLUMNS
TYPICAL
EXISTING WALL
APPLICATION
20 GA. GALV.
MADISON INDUSTRIES INC.

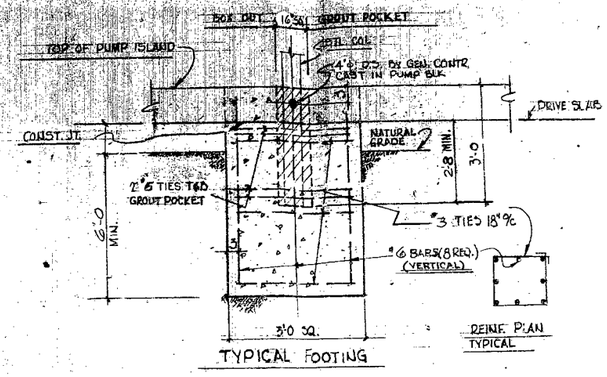
88152-12



88152-131

22:1





DO NOT USE FOR CONSTRUCTION UNLESS APPROVED IN SPACE BELOW

APPROVED FOR CONSTRUCTION

BY

DATE

RECEIVED

LOADING: LL 30 P.S.F.
DL 5 P.S.F.
W.L. 35 P.S.F.
U.L. 44 P.S.F.

88152

REV.	GRID	DESCRIPTION	DATE	BY
REV.	GRID	DESCRIPTION	DATE	BY

MADISON INDUSTRIES INC. OF GA.
P. O. BOX 181
CONYERS, GEORGIA 30207
PHONE (404) 483-4401

DRAWN BY: Jerry Stark DATE: 2-8-71
CHECKED BY: DATE:

71 B & ABBOTT
MIAMI BEACH, FLA
LOCATION

JOB NO. GI-SH-03M

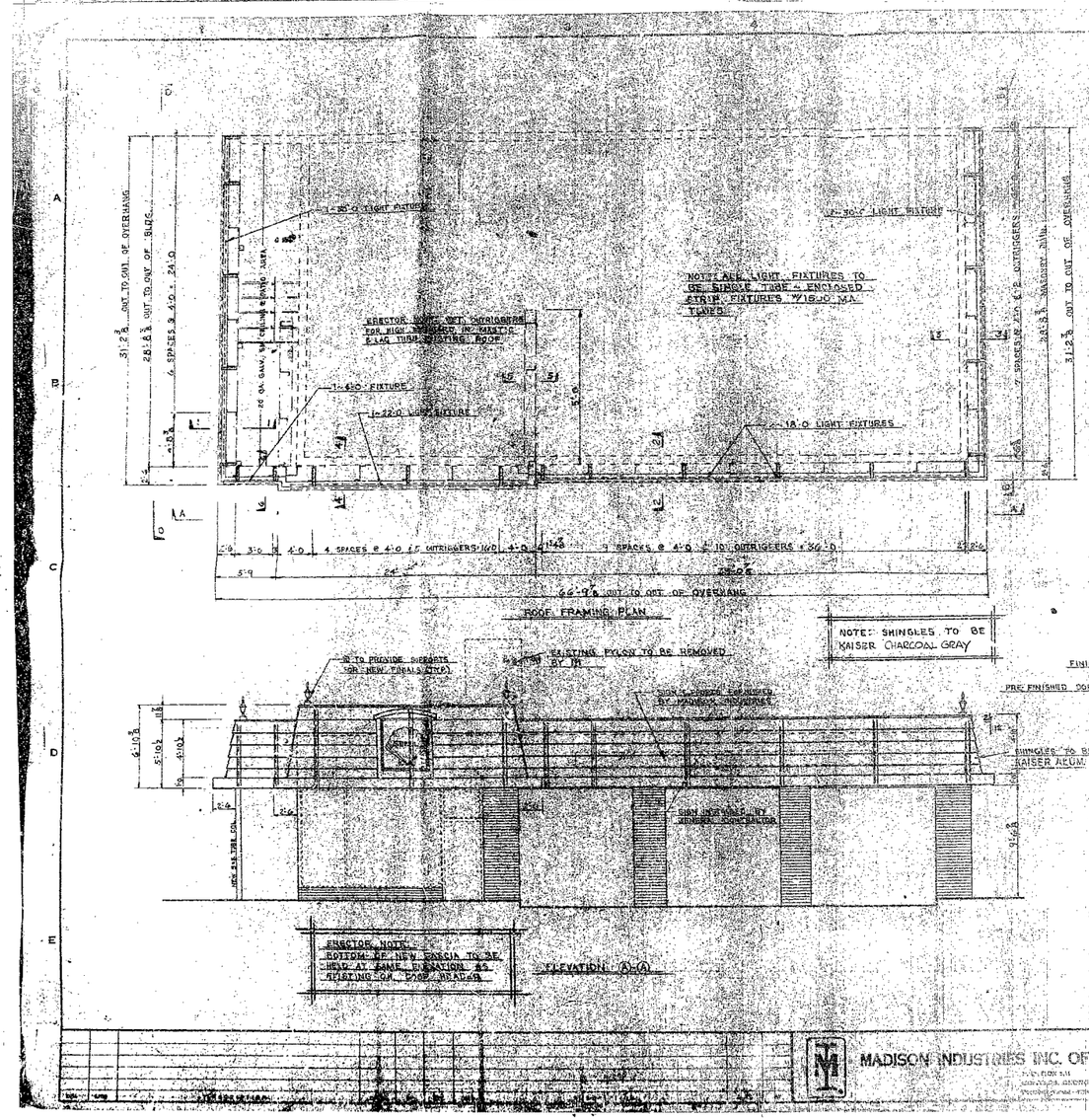
TITLE: SHELL OIL COMPANY
20'-0 x 20'-0 MANSARD CANOPY
FREE STANDING ~ SINGLE COL.

DRWG NO. F-1C REV.

SHEET OF

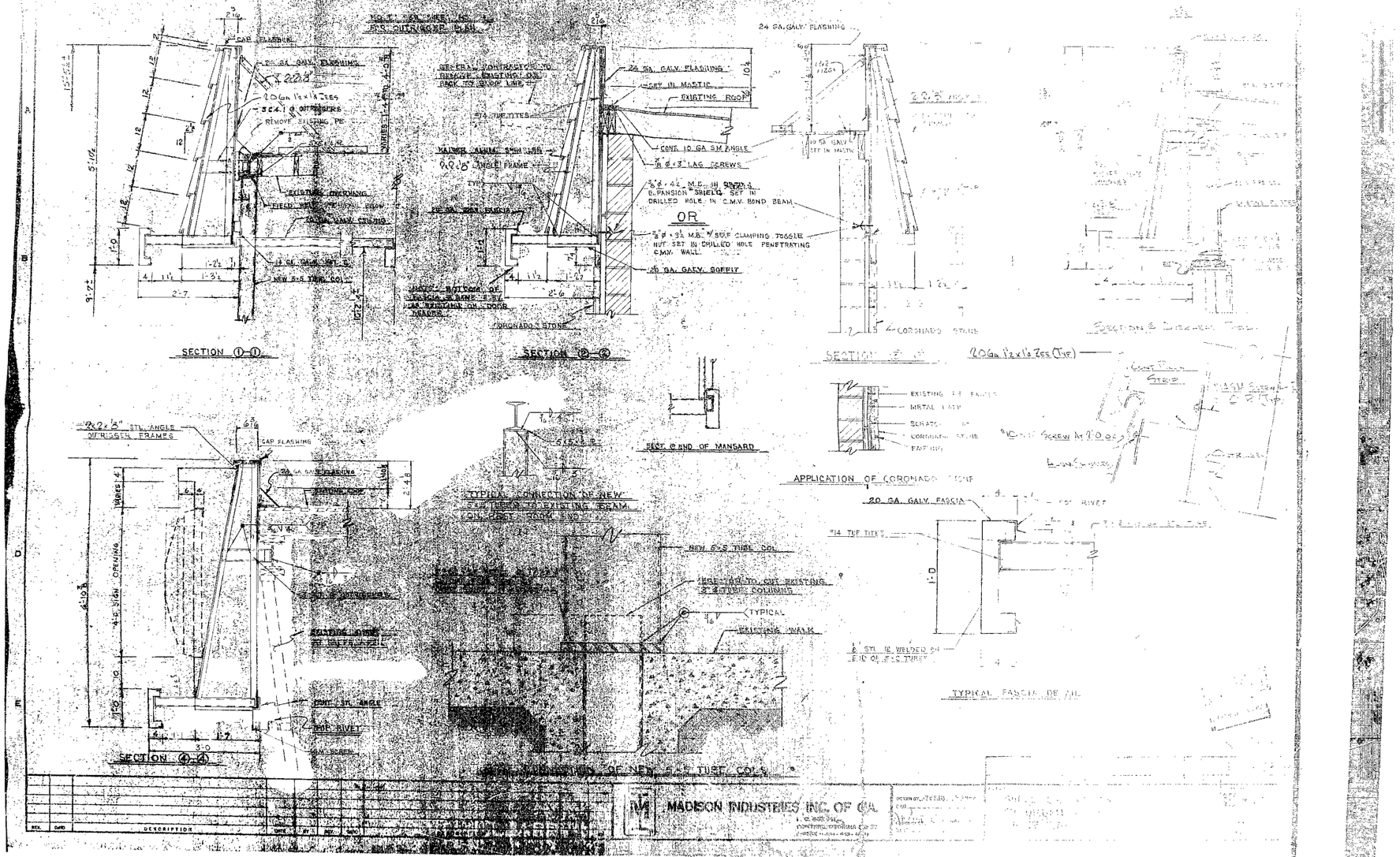
88152-14

1221

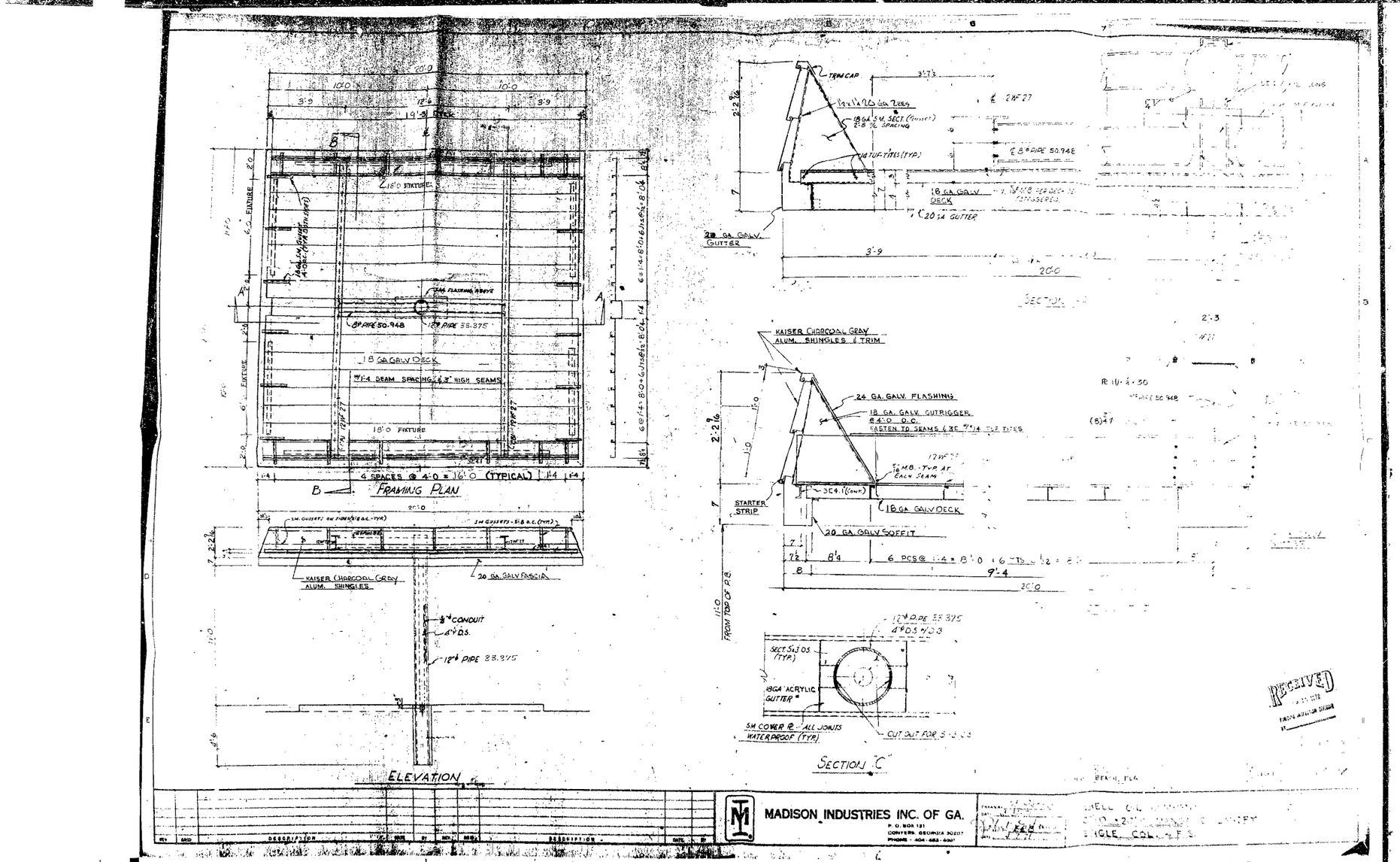

1-30'-0 LIGHT FIXTURE
1-4'-0 FIXTURE
1-22'-0 LIGHT FIXTURE
NOTE: ALL LIGHT FIXTURES TO BE SINGLE TUBE 4 ENCLOSED STRIP FIXTURES W/ 1500 MA. TUBES
18'-0 LIGHT FIXTURES
4 SPACES @ 4'-0" = 16'-0"
5 SPACES @ 4'-0" = 20'-0"
66'-9½" OUT TO OUT OF OVERHANG
ROOF FRAMING PLAN
NOTE: SHINGLES TO BE KAISER CHARCOAL GRAY
EXISTING PYLON TO BE REMOVED
SIGN CABINET RELOCATED BY MADISON INDUSTRIES
SIGN UNDERWRITERS LABORATORIES APPROVED
ELEVATION A-A
SCOPE OF WORK
1. REMOVE ONLY AS NECESSARY SHINGLES & ROOFING FLASHING
2. INSTALL SUPERIOR STYLE MANSARD OVERHANG ENTIRE LENGTH OF TWO SIDES OF EXISTING THREE WAY BUILDING
3. PRE-FINISHED ALUM. 5 V.C. SHINGLES BY MADISON
4. PRE-FINISHED ALUM. FASCIA, SOFFIT & TRIM BY MADISON INDUSTRIES
5. SPECIAL FLASHING AND CONSTRUCTION JOINT AS PER DETAIL FOR ALL ROOFING TO REMAIN. (NO PATCHING OF EXISTING ROOFING MAY REMAIN)
6. PAINT ALL EXPOSED METAL FLASHING
7. FOR REMOVAL OF OVERHANG SEE SHEET A-1
8. PROVIDE STEEL MOUNTING BRACKETS FOR RELOCATION OF TWO SIGNS AS SHOWN. NEW SIGNS FOR SERVICE STATION SIGN NOT INCLUDED.
9. REMOVE EXISTING SUPPORT COLUMNS AT REAR ISLAND AND INSTALL THREE NEW BEARING COLUMNS.
10. PROVIDE ALUM. FLASHING FROM TOP OF NEW FASCIA TO EXISTING ROOF
11. REMOVE AND INSTALL 16" x 24" FIRE STARTING CANOPY WITH PRE-FINISHED ALUM. SHINGLE MANSARD EACH FOUR SIDES
EXISTING WALL TYP.
REINF. VENEER BY OTHERS
ELEVATION B-B
FINIALS
PRE-FINISHED DORMER
PRE-FINISHED FASCIA TRIM
SHINGLES PRE-FINISHED ALUMINUM BY MADISON INDUSTRIES
SHINGLES TO BE KAISER ALUM.
ELEVATION C-C
RECEIVED
ENGINEERING DIVISION
ELEVATION D-D
MADISON INDUSTRIES INC. OF GA.

88152-15

227

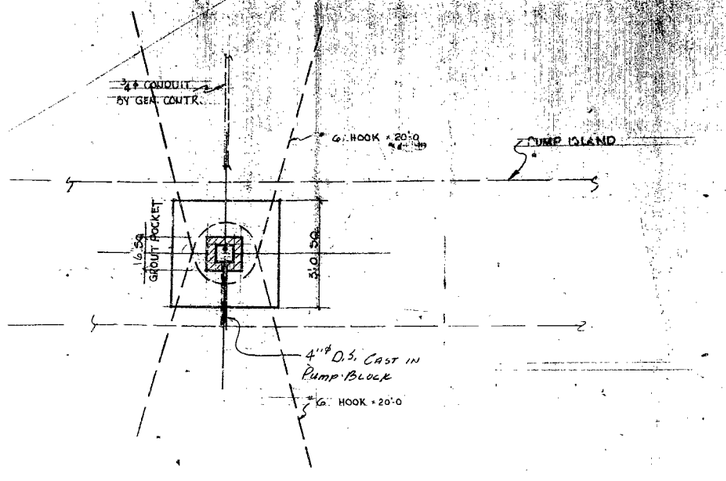

SECTION ①-①
SECTION ②-②
SECTION ③-③
SECTION ④-④
SECTION ⑤-⑤
SECTION ⑥-⑥
APPLICATION OF CORONADO STONE
TYPICAL FASCIA DETAIL
20 GA. GALV. FLASHING
20 GA. GALV. FASCIA
EXISTING ROOF
EXISTING WALK
NEW 6"-S TUBE COL.
MADISON INDUSTRIES INC. OF CA.

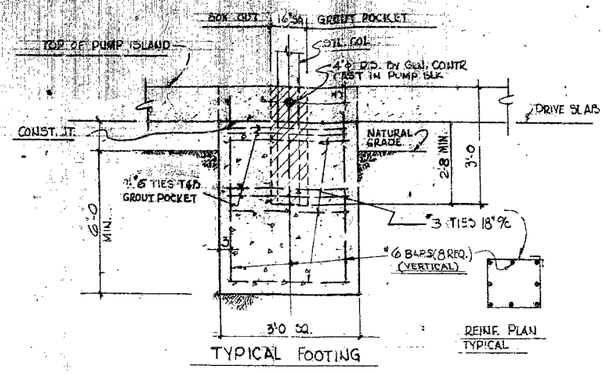
88152-16



88152-171

1321





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SEP 15 1972
BUILDING INSPECTION DIVISION
BY

#88152

LOADING: LL 30 P.S.F.
DL 5 P.S.F.
W.L 35 P.S.F.
U.L 1.4 P.S.F.

REV.	GRID	DESCRIPTION	DATE	BY

MADISON INDUSTRIES INC OF GA.
P. O. BOX 281
CONYERS, GEORGIA 30207
PHONE (404) 483-6401

DRAWN BY: Jerry Stuart
CHECKED BY: Robert E. Hanson

715 E ABBOTT MIAMI BEACH, FLA (LOCATION)	GI-SH-03M (JOB NO.)
TITLE: SHELL OIL COMPANY 30'-0 x 20'-0 MANSARD CANOPY FREE STANDING ~ SINGLE COL.	DRWG NO. F-1C REV. SHEET OF

88152-18

1221